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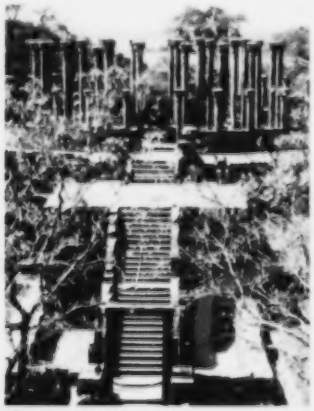
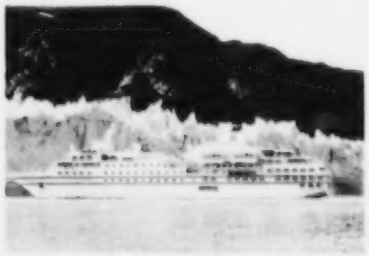
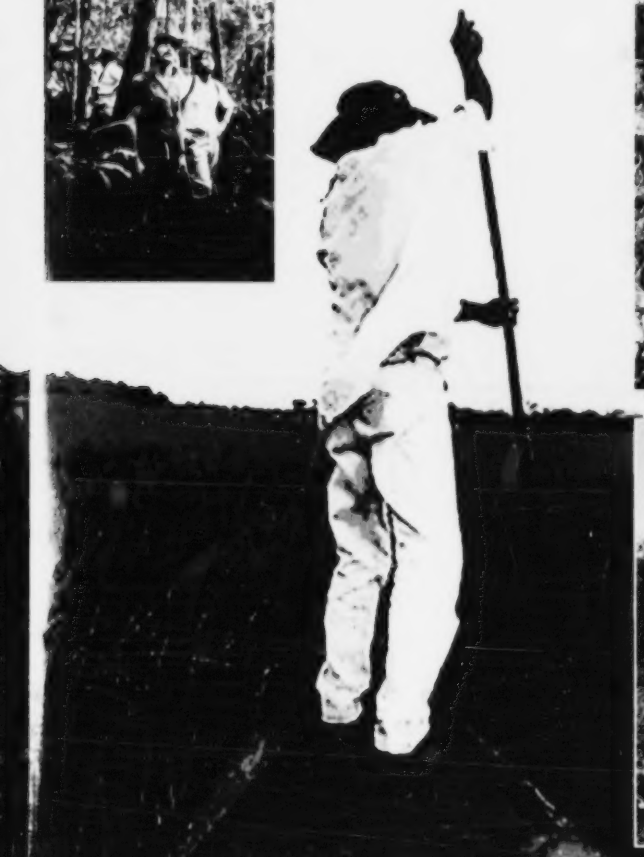
Ecotourism and sustainability

- Tourism and development
- Alternatives for local communities
- Certification programmes
- Protection of biodiversity







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The opportunities of ecotourism

Klaus Toepfer
United Nations Under-Secretary General and Executive Director, UNEP

To many people ecotourism is a "buzz word". It is a word that is often misused or misunderstood. As the authors of several articles in this special issue of *Industry and Environment* point out, definitions of ecotourism are still evolving. However, as a general goal ecotourism should provide an opportunity to develop tourism in ways that minimize that industry's negative impacts. As a sustainable tourism tool, ecotourism can be a means of avoiding environmental degradation while sharing economic benefits with local people.

Travel by individuals or small groups to relatively untouched natural areas - where they can experience the natural environment and encounter local people directly - has been increasing rapidly in the last two decades. Although this type of tourism ought to have positive environmental and social effects, it could be as damaging as mass tourism if not properly organized.

Because ecosystem projects typically focus on pristine or fragile ecosystems, these projects run the risk of destroying the assets on which they depend. Among their possible impacts are loss of biodiversity and wildlife habitats, and the creation of waste and pollution in areas with little or no capacity to absorb them. Problems relating to social fairness and stakeholder involvement and control may also need to be considered where ecotourism is introduced.

Some ecotourism operations have succeeded in minimizing negative impacts on vulnerable ecosystems and, at the same time, offered local people much-needed alternative livelihood options. It has been shown that in these cases ecotourism can help finance the protection of ecologically sensitive areas and support the socio-economic development of communities in or near these areas.

Ecotourism is one of the fastest growing segments of the expanding international tourism industry. Despite uncertainties following the destabilizing events in the last few months of 2001, the World Tourism Organization estimates that there will be substantial growth not only in the number of international tourist arrivals (expected to exceed one billion by 2010) but also in the percentage of tourists who choose to take part in ecotourism activities. As ecotourism becomes more important economically, ensuring that it follows a truly sustainable path will require cooperation – and partnerships – among the tourism industry, governments, local people and, above all, tourists themselves.

To address these issues, the United Nations has designated 2002 as the International Year of Ecotourism (IYE). The UN Commission on Sustainable Development has mandated the UN Environment Programme (UNEP) and the World Tourism Organization to coordinate and carry out international activities. During the IYE, ecotourism's effects on biodiversity, its other social, economic and environmental impacts, and its potential contribution to sustainable development will be reviewed. The effectiveness of regulatory mechanisms and voluntary programmes in monitoring and reducing these impacts will also be assessed.

A number of non-governmental organizations have expressed concerns about the International Year of Ecotourism. These NGOs fear the IYE could lead to the promotion of unregulated forms of nature tourism that damage the environment and have undesirable effects on the lives of local people. UNEP recognizes these concerns and the need for effective dialogue. In this regard, the creation of an International Forum on Ecotourism at the World Ecotourism Summit in Quebec in May would be an important step towards ensuring that such dialogue continues at the highest level.

The articles in this issue of *Industry and Environment* are intended to contribute to the process of review during the International Year of Ecotourism. They cover a wide range of issues and practical experience. I invite you to give us your comments, and thus to become part of the process.

◆

World Tourism Organization perspectives on the International Year of Ecotourism

Francesco Frangialli, Secretary-General, World Tourism Organization (WTO), Capitan Haya, 42, 28020 Madrid, Spain
(omt@world-tourism.org; www.world-tourism.org)

The International Year of Ecotourism demonstrates the United Nations' recognition of ecotourism's social and economic importance. The UN General Assembly wished to draw the attention of governments, and the international community, to the potential impacts (both positive and negative) of ecotourism on the natural environment, biodiversity conservation, and the social and cultural fabric of host communities. The World Tourism Organization (WTO) is coordinating a series of activities – leading up to and during the IYE – with UNEP and other international and regional organizations, as well as its Member States, Affiliate Members and other groups.

The ecotourism concept was adopted comparatively recently and is subject to various interpretations, some more accurate than others. On the occasion of the IYE, WTO and other collaborating parties have agreed that the ecotourism concept reflects "all forms of tourism in which the tourists' main motivation is the observation and appreciation of nature, that contribute to the conservation of, and that generate minimal impacts upon, the natural environment and the cultural heritage."

IYE will further efforts towards a generally acceptable interpretation of the term "ecotourism" and its more rigorous commercial application. Ecotourism operations should minimize negative impacts on the natural and socio-cultural environment and contribute to the conservation of natural areas by:

- generating economic benefits for host communities, organizations, and authorities managing natural areas for conservation purposes;
- providing alternative income opportunities for local communities; and
- increasing awareness of natural and cultural assets among local people and tourists.

As a market segment, ecotourism can be distinguished by visitors' motivations and the types of destinations and attractions that attract them. It is a form of nature-based tourism and, as manifestations of traditional cultures are often found in areas visited by ecotourists, it is associated with cultural tourism.

While sustainability needs to be encouraged in all segments of the tourism industry, it is a much stronger imperative in the case of ecotourism. Nonetheless, unsustainable ecotourism is practised throughout the world. It threatens the survival of the natural environment that is the basis of nature-based tourism, and can undermine and even discredit this type of travel.

The International Year of Ecotourism presents opportunities and challenges for the international community. WTO, which would like to involve the widest possible range of stakeholders, has defined the following objectives for the IYE:

- to generate greater awareness among public authorities, the private sector, civil society and consumers regarding ecotourism's capacity to improve conservation of the natural and cultural heritage and local communities' standards of living, as well as to encourage respect for nature, indigenous cultures and their diversity;
- to disseminate methods and techniques for ecotourism planning, management, regulation and monitoring to ensure its long-term sustainability;
- to promote exchanges of experience with ecotourism;
- to increase opportunities for efficient marketing and promotion of ecotourism destinations and products;
- to promote minimum quality standards, as well as trustworthy and comparable certification systems for ecotourism suppliers.

WTO has undertaken a number of activities at different levels to meet these objectives:

- It has recommended that Member States create local and national multi-stakeholder committees. These would continue to exist after the IYE, coordinating and monitoring ecotourism activities in each country. Forty-one Member States have responded with respect to creating committees and/or national action plans, or initiating national ecotourism fora or local ecotourism development activities within the framework of the IYE.
- Regional WTO conferences are being organized to exchange experiences, examine problems, promote cooperation nationally and internationally, and identify future challenges. Regional preparatory meetings have already been held for Africa, the Americas, CIS countries, Europe and Mediterranean Europe, the Middle East and North Africa. Further meetings are scheduled in the Seychelles for island destinations, in Algeria for countries with desert areas, in the Maldives for the Asia-Pacific region, and in Fiji for South Pacific islands. As of November 2001, over 1500 people had participated and some 150 case studies had been presented.
- The conclusions and recommendations of these and other official preparatory conferences will be presented at the World Ecotourism Summit in Quebec, Canada, in May 2002, jointly organized by UNEP and WTO.
- WTO is preparing a series of publications including *Compilation of Good Practices in the Sustainable Development of Ecotourism* (55 case studies from 39 countries), seven country reports on the main European and North American ecotourism markets and a joint UNEP/WTO/IUCN edition of *Guidelines for the Sustainable Development and Management of Tourism in National Parks and Protected Areas*.
- A special page has been created on the WTO web site for IYE-related activities.

The global tourism industry must now respond to the consequences of the attacks on New York and Washington in September. At its recent 14th General Assembly, WTO Members adopted a resolution on terrorism and drew up an action plan to help the tourism industry recover from the effects of these attacks and their aftermath. In the current situation, the International Year of Ecotourism has even greater importance. Ecotourism, which is based on the unique natural features and traditional cultures of destinations, is intended to conserve resources while providing benefits for local communities. It has a special role to play in strengthening international understanding and rebuilding the images of affected countries.

Ecotourism: facts and figures

Ecotourism is responsible travel to natural areas that conserves the environment and sustains the well-being of local people.

The International Ecotourism Society (TIES)

Ecotourism is environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features – both past and present) that promotes conservation, has low negative visitor impacts, and provides for beneficially active socio-economic involvement of local populations.

International Union for the Conservation of Nature (IUCN)

A number of definitions of ecotourism exist. UNEP uses both of those above. In addition, various regions and organizations emphasize particular features of ecotourism. The Worldwide Fund for Nature (WWF), for example, has defined ecotourism as "any travel to or through wilderness areas that has minimal impact on the natural environment and its wildlife while providing some economic benefits to local communities and the areas indigenous stewards."

There is broad agreement on ecotourism's basic characteristics – or at least on what these characteristics *should* be, as there is often a gap between ideals and practice. Ecotourism generally:

- is nature-based (visitors are mainly interested in observing and appreciating nature and traditional cultures in natural areas);
- contributes to biodiversity conservation;
- supports the well-being of local people;
- involves responsible action by both tourists and local people to minimize negative environmental and socio-cultural impacts;
- requires the lowest possible consumption of non-renewable resources;
- stresses local ownership, as well as business opportunities for local (especially rural) people.

Ecotourism tends to be modest in scale (e.g. tour groups of no more than 25 people, hotels with fewer than 100 beds). It is also likely to be operated by small or medium-sized companies that specialize in leading – and providing accommodation for – small groups in natural areas. These companies may furnish guides from the local population. Visitors may be given extensive information concerning ecosystems, local cultures and their relationship to the environment, and sustainability issues.

The tourism industry: economic and environmental impacts

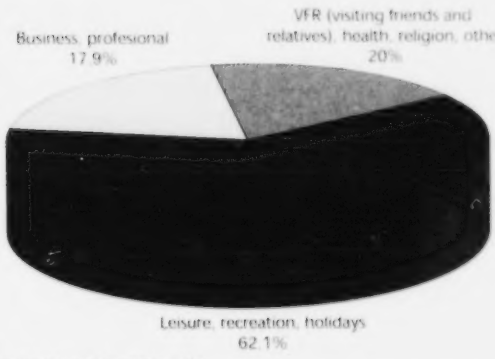
Ecotourism is one of the fastest-growing segments of the tourism industry. Long-term forecasts by the World Tourism Organization have predicted substantial growth not only in the number of international tourist arrivals worldwide (expected to exceed one billion by 2010) but also in the percentage of these tourists who will take part in ecotourism.

The World Tourism Organization has estimated that "nature travel" – of which ecotourism is one form – generated about 7% of all international travel expenditure in 1997. According to the World Resources Institute, at the beginning of the 1990s tourism overall was growing at a rate of 4% per year and nature travel at a rate of 10-30%. These figures are supported by a 1997 survey of tour operators in the Asia-Pacific region, who were experiencing annual growth rates of 10-25%. World Tourism Organization estimates show global spending on ecotourism increasing by 20% per year, about five times the average rate of growth in the tourism industry as a whole.

One element affecting demand for nature-based tourism is the increase in environmental consciousness worldwide. Nature films and publications have made destinations which are of special environmental interest much more widely known than they once were.

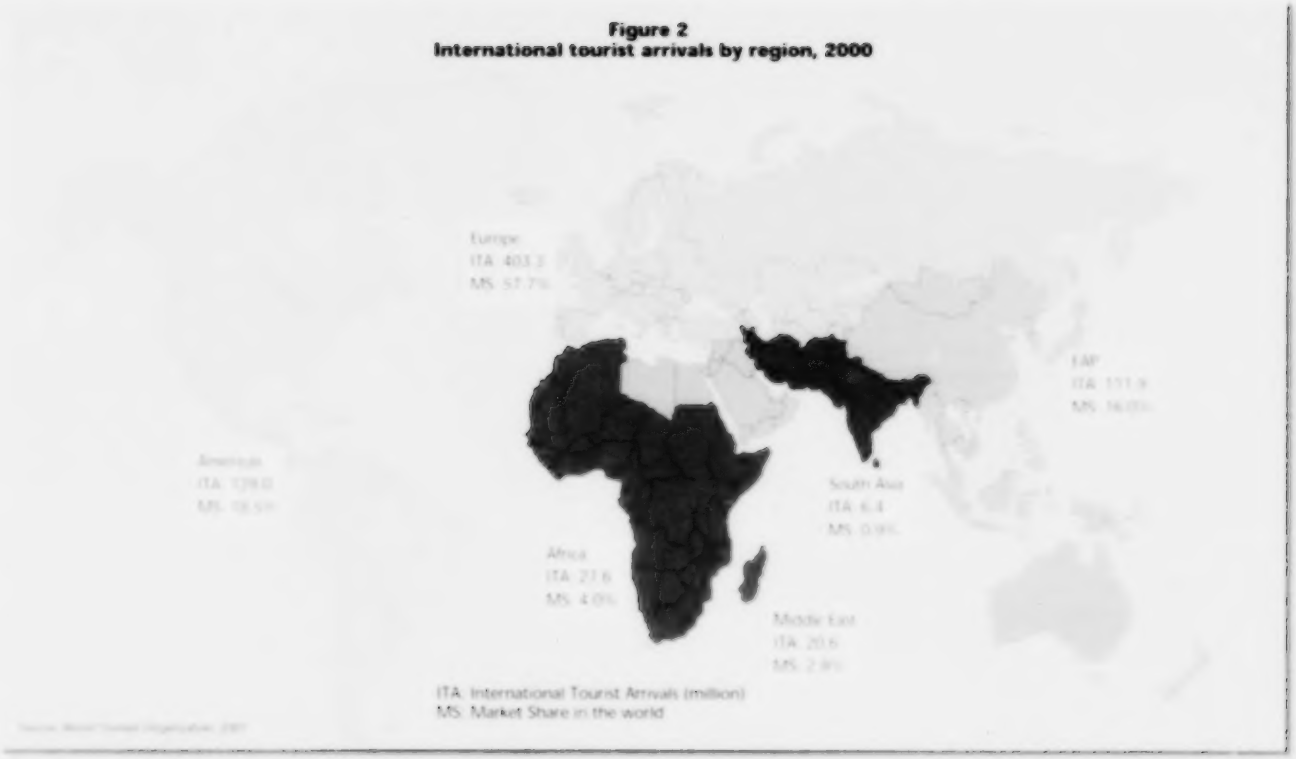
The economic value of tourism-related activities is difficult to assess. Many types and sizes of enterprises are involved. Some of them engage in

Figure 1
International tourism by purpose of visit, 1998



Source: World Tourism Organization, 2001

Figure 2
International tourist arrivals by region, 2000



ITA: International Tourist Arrivals (million)
MS: Market Share in the world

countries than in 1999, an increase of 14.7%. The number of domestic tourists within countries is more difficult to measure, but is often estimated to be up to ten times the number of international visitors.

The industrialized countries of the Americas, Europe and Asia are the main destinations (and the main sources) of international visitors. Nearly 58% of international tourist arrivals are European residents and more than 18% are from the Americas.[3] However, there has been substantial growth in the number and diversity of tourists from other parts of the world. In terms of international departures, East Asia and the Pacific is the fastest growing region.

In many countries tourism has become the major source of foreign exchange earnings. According to the World Tourism Organization, tourism is one of the top five export categories in 83% of 29 countries and the main source of foreign currency in at least 38%. As a source of employment and poverty alleviation tool, tourism plays an essential role in many countries' economies. Nature-based tourism is especially important in developing countries, for example those lacking significant industrial, financial or resource extraction industries.

While tourist visits may be concentrated in critically important conservation areas, often these areas do not benefit economically from tourism – or not to the extent required to protect the ecosystems on which this type of tourism depends. The IUCN considers most of the world's park programmes to be underfunded and to provide only a minimum of resource protection. Tourism in these areas can have destructive effects (e.g. trail erosion, wildlife harassment, poaching, road damage and sewage run-off). Many parks cannot undertake adequate visitor management. In some countries the scope of the ecotourism industry is limited by the financial non-viability of park agencies.[4]

Measuring ecotourism

Figures on ecotourism are incomplete and difficult to obtain. Before an industry sector can be measured, that sector needs to be clearly and objectively defined. Besides the definitions above, two general viewpoints are associated with the evaluation of ecotourism: "aspirational" (i.e. concerned with what ecotourism should be) and "phenomenological" (i.e. concerned with products that are presented as examples of ecotourism, many of which are far from the idealized image). The diversity of ecotourism ideas and products, as well as an ongoing debate with respect to definitions, render measurement taking extremely difficult. The many stakeholders (e.g. governments, the tourism industry, park management, social and environmental NGOs, organizations representing indigenous or traditional inhabitants) can make defining and measuring even more complex.

Regarding the "aspirational" aspect of ecotourism, most of those involved are idealists, at least to some extent. But how can aspirations be measured? Small-scale local operators or groups do not have the ability to hire market survey consultants. Most tourism trade associations do not consider the current volumes of ecotourists large enough to justify major investment in market research. As ecotourism can be highly controversial, with very vocal NGOs and indigenous people, for example, presenting their opinions, a great many operators may prefer not to offer ecotourism.

No in-depth studies have been carried out to determine the extent to which travel decisions by nature tourists are based on ecotourism principles. However, at least two such studies have been initiated. The Inter-American Development Bank has included a regional South American study in a US$ 1.8 million bid, to be released by the Brazilian government as part of the Proecotur package (US$ 200 million to support ecotourism in the Brazilian Amazon), and the World Tourism Organization has undertaken a European market survey (see page 64).

Ecotourism is often equated with "nature tourism". This can distort figures indicating market size. Studies concerning nature tourism have shown that up to 50% of all tourists would like to visit a natural area (e.g. a national park), which suggests a very large potential market. But these tourists do not necessarily want to travel in small groups, learning about wildlife and culture with a local guide. Figures on nature tourism and on visits to national parks and other protected areas nonetheless give some idea of ecotourism's potential size and rate of growth.

During the last ten years the number of visits to national parks in potentially important ecotourism destinations has grown dramatically, demonstrating a shift in tourism preferences from traditional popular destinations in Europe to nature destinations mainly located in developing countries. The number of foreign visitors to Costa Rica's parks increased from 65,000 in 1982 to around 400,000 in 1998.[5] Other countries have experienced similar trends (**Table 2**).

Who benefits from ecotourism?

Local people are those most immediately affected by the emerging market for international ecotourism. They also have the most to lose. Ecotourism seeks to increase local control over tourism's effects by stressing that local communities and business owners should be considered a vital part of an ecotourism programme. One of the principles of ecotourism is that local people are to be informed in advance of all the possible consequences of tourism development, and that they must formally consent to tourism development in their area.

According to the World Bank, ecotourism (along with adventure travel and cultural travel) is one of the three types of tourism most amenable to community-based initiatives. These niche markets provide especially desirable 'customers' for culturally or environmentally sensitive areas. Ecotourists typically spend more and stay longer at a destination than the average tourist, generating a higher yield but with less impact on the life of the community and on local culture and the environment. Community-based tourism can generate a sense of pride in the local population and make funds available for maintaining or expanding cultural assets (e.g. archeological ruins, historic sites, traditional crafts production).[1] It may also provide some of the best opportunities for 'pro-poor tourism', which takes the needs of disadvantaged local people into account in the planning of tourism development.[2]

Ecotourism can have both direct and indirect economic impacts on a community. Direct impacts are derived from money spent directly by visitors. For example, at a restaurant, indirect impacts occur when the restaurant purchases goods and services from other businesses and pays its employees, who can use their wages to buy other goods and services. If the restaurant obtains goods or services outside the local area, the money has no indirect impacts on this area – it is 'leakage' (Figure 4).[3]

By their nature, certain projects have an unavoidably high leakage rate. In many African countries nature-based tourism is the first or second most important foreign currency earner. However, there is often severe leakage since so many products used in tourism, from safari vehicles to guidebooks, are imported.[4]

Ecotourism's economic contribution to local communities needs to be evaluated based mainly on the success of local vendors. The types of products and services most often offered to ecotourists by local community members include food (e.g. from stands, restaurants), vehicle rentals, taxis, guided visits, recreation (e.g. using horses, boats, rafts, bikes) and crafts. Vendors are crucial to the success of any ecotourism venture and its ability to benefit local communities. Frequently their businesses are quite small. Owners may need some encouragement or capital assistance to get started. This could be provided by NGOs or the ecotourism industry.

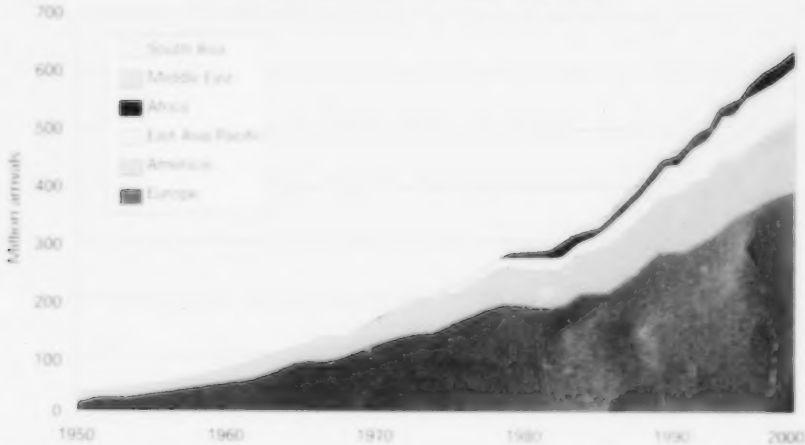
The economic contribution of ecotourism to local communities can vary tremendously, depending not only on the nature of the project but also on the destination's characteristics. In

Table 1
World international tourism receipts by region (US$ billion)

	1985	1990	1995	1998	1999	2000	Growth rate 2000-1999	Average annual growth (%) 1985-2000	1995-2000
World	118.1	263.4	406.2	442.4	453.4	475.8	4.5	9.1	3.2
Africa	2.5	5.3	8.1	9.8	10.3	10.1	-2.7	10.2	3.1
Americas	33.3	69.2	100.5	118.0	122.4	126.4	3.3	9.9	4.7
East Asia/Pacific	13.7	39.2	74.8	67.8	73.2	82.5	12.6	13.0	2.0
Europe	63.5	143.5	211.7	232.5	234.1	231.5	-0.7	8.6	1.8
Middle East	4.2	4.4	7.5	8.6	9.8	9.7	-0.6	5.7	5.3
South Asia	1.4	2.0	3.6	4.3	4.6	5.1	10.1	8.6	7.0
Market share									
World	100	100	100	100	100	100			
Africa	2.2	2.0	2.0	2.2	2.3	2.2			
Americas	28.2	26.2	24.8	26.8	25.1	26.1			
East Asia/Pacific	11.7	14.9	18.4	15.4	16.0	17.3			
Europe	53.8	54.4	52.2	52.7	50.9	48.6			
Middle East	3.5	1.7	1.9	1.9	1.9	2.0			
South Asia	1.2	0.8	0.9	1.0	0.9	1.1			

Source: World Tourism Organization (WTO) – data is subject to WTO revision, August 2001

Figure 3
International tourist arrivals, 1950-2000



Source: World Tourism Organization, 2001

Figure 4
Ecotourism's economic impacts and leakage

Source: World Tourism Organization, 2001

Table 2
Visitation rates: nature-based destinations

Country	1990	1999	Total % increase	Average annual increase
South Africa	1 029 000	6 026 000	486%	19.3%
Costa Rica	435 000	1 027 000	136%	9.0%
Indonesia	2 178 000	4 700 000	116%	8.0%
Belize*	88 000	157 000 (1998)	78%	6.0%
Ecuador	362 000	509 000	41%	3.5%
Botswana*	543 000	740 000 (1998)	36%	3.1%

* visitation rates not available for 1999

Source: World Tourism Organization, 2000

requiring high-quality guide services by local people, controlling which islands are visited and which trails are used, and providing some support to park management.

It is important to set fees high enough to cover the expenses of proper park management. When entrance fees are too low, the government may be subsidizing tourism – and its attendant impacts.[17]

Environmental impacts of ecotourism

Because of its scale and global extent, tourism inevitably has important environmental impacts. At the same time, it depends heavily on natural resources such as beaches, mountains, rivers, forests and biodiversity. Threats to the environment therefore threaten the tourism industry's viability. The growth in tourism worldwide presents a significant threat to cultural and biological diversity. Ecotourism, despite its environmentally friendly goals, can also have negative impacts if it is not managed correctly. Major environmental impacts of tourism are listed in Table 3. Many of these could result from unsound ecotourism projects as well.

Ecotourism projects have especially high potential environmental impacts owing to their nature, as they are typically located in pristine or fragile ecosystems. Such areas often have a high degree of biodiversity (one reason they are desirable for ecotourism), but also tend to be extremely vulnerable to environmental damage. Even more than other forms of tourism, ecotourism risks damaging the environmental assets on which it depends. Among the potential negative impacts to which ecotourism developments are vulnerable are overcrowding, erosion, deforestation for increased access and construction of facilities, loss of biodiversity and habitats, increased competition for scarce resources, and increased waste and pollution in areas with little or no capacity to absorb them.

Ecotourism also has the potential to create positive environmental and social impacts. Indeed, it is this potential that has attracted so much attention to the concept of ecotourism. Potential positive impacts include the community benefits mentioned above, as well as the opportunity to develop tourism in a way that minimizes negative impacts from the start – without the crowding, sprawl and environmental degradation so often associated with mass tourism. Since ecotourists are often more tolerant of simple or rustic facilities than average tourists would be, tourism income can be increased with lower capital investments than those required for mass tourism developments. In some cases, ecotourism can support capital improvements over the long term.[18]

Most ecotourism takes place in national parks, wildlife reserves and similar protected areas established to serve environmental conservation goals. The motives for ecotourist travel are a natural fit with the aims and management philosophy of park agencies. However, tourism – including eco-

The role of governments

One of the fundamental problems with respect to environmental protection is the difficulty of putting a value on the environment and on resources such as scenery or biodiversity. Ecotourism helps create a direct commercial value for environmental protection through entry fees charged at national parks and protected areas. Well-regulated protected areas, like the Galapagos Islands (Ecuador), have created significant local and national level benefits from entry fees paid by nature and ecotourism companies on behalf of their clients and from license fees for tour boats (see page 34). In 1998, Galapagos entrance fees totaled US$ 4.3 million. Over the years, such fees have enabled Ecuador's national park service to manage the islands by limiting visitor numbers

Table 3
Major environmental impacts of tourism

Pressure on natural resources

Land and landscape: land clearance for construction, road and airport building, resulting in habitat loss, loss of scenic values, heritage destruction

Marine resources: recreational impacts (scuba diving, snorkeling, sport fishing), damage to coral reefs and subsequent impacts on coastal protection and fisheries

Atmosphere: high energy use by tourism facilities and transportation

Freshwater: overuse of critical water resources by hotels, swimming pools and golf courses; this is of particular concern in regions such as the Mediterranean (where water is scarce and tourists consume over 200 litres a day)

Pressure on other local resources, e.g. energy, food and raw materials that may be in short supply locally

Land: loss to wildlife and habitats, and associated biodiversity loss

Biological resources: disruption of wildlife habitats, clearance of vegetation for tourism development, increased pressure on endangered species due to trade and hunting, increased demand for fuelwood, forest fires

Ecologically fragile areas, e.g. rainforests, wetlands, mangroves, coral reefs, sea grass beds: if not properly planned and managed, nature tourism threatens the world's most ecologically fragile areas including parks and natural World Heritage sites

Pollution and waste

Land: solid waste and litter (tourists produce on average around 1 kg of waste a day)

Freshwater: pollution by sewage

Marine waters and coastal areas: sediment run-off, pollution from land-based hotels and marinas, waste and litter associated with marine sports and cruises (in 1995, it was estimated that cruise ships in the Caribbean alone produced over 70,000 tonnes of waste per year)

Air: at local level, air pollution from transporting tourists; global impacts especially from CO_2 emissions, relating to energy use in transportation, air-conditioning and heating of tourist facilities, etc.

Noise: from ground as well as air transportation

Social and cultural pressures relating to conservation/ sustainable use of biodiversity

Social and cultural impacts: disturbance of local way of life and social structures, changes in traditional practices that contribute to conservation (including conservation of biodiversity)

Adverse impacts on livelihoods: lack of benefit sharing with those who bear both human and environmental costs

Resource use conflicts: competition between tourism and local populations for limited water, sanitation and energy resources; competition with traditional land uses (especially in heavily used areas such as coastal zones)

tourism — can degrade environmental quality through overuse, unplanned access to sensitive sites and inappropriate use levels. Ecotourism depends on the long-term sustainability of natural resource management by government agencies. Inadequate financial resources for national park and protected area management can result in overuse, environmental damage, and reduction of ecotourism's potential benefits.[19]

Ecotourism therefore focuses not only on activities but also on environmentally and socially desirable *results*: conservation of the natural resources being visited, and contributions to the well-being of local people. Efforts to generate these benefits have been the primary objective of ecotourism programmes for over ten years. During this period it has become clear that some concerns still need to be better addressed, such as:

- land tenure and control of the ecotourism development process by host communities;
- the efficiency and fairness of protective measures for biological and cultural diversity;
- the need for waste precautions and monitoring when operating in especially sensitive areas;
- indigenous and traditional rights in areas suitable for ecotourism development.

If ecotourism is to become a successful sustainable development tool, adequate funds will be needed to allow planning and long-term management of ecotourism destinations. The size and nature of the ecotourism market should be sufficient to make government funds available to conserve areas, both cultural and environmental, for ecotourism development. Fees and taxes need to be used for resource protection and visitor management.[20] No tourism destination (particularly an "ecodestination") can prosper in the long term if it is overcrowded, dirty, environmentally degraded, and threatened with the loss of its biological and cultural identity.

Notes

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2. World Tourism Organization (2001) *Millennium Tourism Boom in 2000*, online document. These estimates do not include domestic visits to natural areas.
3. The International Ecotourism Society (TIES) (2000) *Ecotourism Statistical Fact Sheet*, online document.
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5. For example, a resident of Country A who has a job in Country B would not be considered a tourist in Country B, but a resident of Country A whose main work location is in Country A would be considered a tourist when visiting Country B on business. See World Tourism Organization, *WTO Tourism Highlights 2000*, 2nd edition, 2000.
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12. Eagles, op. cit.
13. UNEP/TIES (2001) *Ecotourism: Principles, Practices and Policies for Sustainability*.
14. Ibid.
15. Eagles, op. cit.
16. Lindberg, op. cit.
17. UNEP/TIES, op. cit.
18. Adams, op. cit.
19. Eagles, op. cit.
20. UNEP/TIES, op. cit.

For more information on ecotourism:

Tourism and Environmental Protection. Contribution of the United Nations Environment Programme to the Secretary-General's Report on Industry and Sustainable Tourism for the Seventh Session of the Commission for Sustainable Development. Published by UNEP in 1999.

Web sites

- UNEP Tourism Programme: www.uneptie.org/pc/tourism
- World Tourism Organization: www.world-tourism.org
- The International Ecotourism Society (TIES): www.ecotourism.org

The International Year of Ecotourism

Recognizing ecotourism's global importance, the United Nations designated 2002 as the International Year of Ecotourism. The UN Commission on Sustainable Development requested international agencies, governments and the private sector to undertake supportive activities. UNEP and the World Tourism Organization have joined forces to take the leading role in preparing and coordinating activities to be undertaken at the international level.

The International Year of Ecotourism is intended to offer an opportunity to review successful ecotourism experiences worldwide, in order to consolidate tools and institutional frameworks that will ensure its sustainable development in the future. Among the many activities to be undertaken at the global, national, regional and local levels is the World Ecotourism Summit to be held in Quebec, Canada, on 19-22 May 2002.

The World Ecotourism Summit is expected to be the largest ever worldwide gathering of all types of stakeholders involved in ecotourism, including ministers, public sector officials, tourism companies and their trade associations, local authorities, national park managers, NGOs relevant to the ecotourism sector, the academic community and others. It will examine ways to maximize the economic, environmental and social benefits of ecotourism, while avoiding past shortcomings and negative impacts.

Ecotourism and sustainable development

Megan Epler Wood, President, The International Ecotourism Society, PO Box 668, Burlington, Vermont 05402, USA (megan@ecotourism.org)

Summary

The International Ecotourism Society has adopted a standardized approach to the development of ecotourism guidelines. This article presents an overview of standard-setting for ecotourism; the evolution of ecotourism as a market niche; government policies relating to ecotourism; and ways to increase benefits for local people. In general, the sustainability of the tourism industry is just beginning to be addressed at the international level. International efforts to certify ecotourism are at the earliest stages of development.

Resumé

Pour élaborer des directives applicables à l'écotourisme, The International Ecotourism Society a opté pour une approche normalisée. L'article traite du travail d'élaboration de normes pour l'écotourisme, de l'évolution de l'écotourisme en tant que débouché économique, des politiques gouvernementales en faveur de l'écotourisme et des moyens d'accroître les avantages qu'il peut procurer aux populations locales. Dans l'ensemble, on commence tout juste, à l'échelle internationale, à s'intéresser à la compatibilité du tourisme avec le développement durable. Les efforts internationaux pour homologuer l'écotourisme n'en sont qu'à leurs premiers balbutiements.

Resumen

La Sociedad Internacional de Ecoturismo ha estandarizado su enfoque para desarrollar pautas sobre ecoturismo. En este artículo se presentan las generalidades sobre la fijación de estándares de ecoturismo, la evolución del ecoturismo como nicho de mercado, las políticas gubernamentales para el ecoturismo y las formas de aumentar los beneficios para los pobladores locales. En general, este enfoque orientado a la sustentabilidad de la industria del turismo a nivel internacional es incipiente. Los esfuerzos por certificar el ecoturismo se encuentran en su etapa inicial.

Ecotourism has developed during the last ten or 15 years as both an industry and a form of sustainable development that conserves natural areas and sustains the well-being of local people. As a concept, it aspires to achieve sustainable development results in all cases. But ecotourism products have become numerous enough to be considered a market segment with sustainable and unsustainable characteristics.

Ecotourism has been widely used (and often misused) as a market label in a variety of circumstances. Nonetheless, the strong orientation of the ecotourism field towards the evolution of principles, guidelines and certification based on sustainability standards gives it a market niche strongly associated with sustainability.

During the 1990s, dozens of conferences were held to discuss ecotourism principles. A variety of definitions emerged worldwide to describe this new phenomenon. In 1991, The International Ecotourism Society (TIES) coined one of the first and best recognized definitions, "responsible travel to natural areas that conserves the environment and sustains the well-being of local people."

While there are certainly lessons to be learned from good and bad examples of all kinds of tourism development, a genuine analysis of ecotourism should probably be based on projects formulated to follow ecotourism principles. Efforts to set sustainability standards for the ecotourism industry are less than ten years old. For those interested in understanding how sustainability can be achieved, analysis of projects developed with ecotourism principles in mind will likely produce the most interesting and consistent results. The articles in this issue of *Industry and Environment* should provide some excellent new examples for researchers and practitioners to study.

Efforts to look at the wide variety of nature-based tourism products which were not formulated with sustainability standards in mind may be less productive. While ecotourism is in nearly all cases nature tourism, not all nature tourism is ecotourism. Rarely has the mainstream cruise line industry, for example, defined itself as ecotourism – despite its dependence on natural resources. While more work needs to be done on cruise lines sustainability standards, it would not be accurate to analyze them as an ecotourism industry.

It is important to recognize that any discussion of the sustainability of the tourism industry is very new. Tourism was not included in the global dialogue on sustainable development that took place at the time of the Rio Summit, resulting in the formation of the UN Commission on Sustainable Development (UNCSD). Only in 1998 did UNCSD address the sustainability of the tourism industry. In general, international discussion of the tourism industry's sustainability is still a very immature process that needs more expertise and fuller commitment from governments, industry and the development community. That process is just beginning.

Ecotourism standards

The process of establishing principles for ecotourism in the 1990s primarily took place at conferences, attended for the most part by academics and NGO representatives. Usually there was little involvement by industry members. This resulted in a variety of principles and standards that may or may not be applicable in practice.

The International Ecotourism Society (TIES) found that guidelines offer a practical participatory tool for coming to consensus directly with industry members on sustainable development practices. The guideline development process was studied by TIES in the early 1990s to help determine how best to get a variety of stakeholders to adopt sustainability principles. TIES then adopted a standardized approach to the development of ecotourism guidelines. First, best practice information is gleaned from industry members through surveying. Second, participatory multi-stakeholder meetings (involving researchers specializing in impacts on natural areas and local people, industry, NGOs and communities) are held in Northern and Southern locations. Finally, international review takes place, helping ensure that a wide variety of viewpoints from many nationalities are incorporated. TIES has completed this procedure for nature tour operators (International Ecotourism Society, 1993), ecolodges (Mehta et al., in press) and marine ecotourism (Halpenny, in press).

Efforts to certify ecotourism are at the earliest stages of development. Certifying ecotourism businesses involves gathering data on their environmental and social performance and then verifying these data. Difficult issues arise when trying to establish measurable benchmarks for principles that are highly qualitative (such as the level of community involvement). Efforts to certify ecotourism businesses have been led by Australia, which established a research programme in 1994 and launched a federally funded initiative in 1996 (see article by Meaghan Newson beginning on page 25 of this issue of *Industry and Environment*). It is the only ecotourism specific certification programme in the world.

The author, with former TIES staffer Elizabeth Halpenny, has published a proposal for Guidelines for Successful Ecotourism Certification in a recent article (Epler Wood and Halpenny, 2001). This article suggests that indicators must be arrived at for each segment of the industry via local stakeholder participation, and that independent verification procedures are needed to ensure

objectivity. Final standards for ecotourism certification programmes are likely to appear in the next two to three years.

Evolution of ecotourism as a niche market

International nature-based businesses began to thrive in the 1980s with the growing interest in outdoor travel and the environment, spurred by excellent new outdoor equipment for camping and hiking and events such as Earth Day. Specialist companies close to the destinations of interest began to run ground operations and developed their own cadres of highly trained local guides. Nature-based tourism companies from San Jose, Costa Rica, to Katmandu, Nepal, proliferated.

This created a significant opportunity for local entrepreneurs and nature guides (not to be confused with community-level business development, which will be addressed in another section of this article). International tour operators and their ground-based counterparts offering trips to the Galapagos Islands, Costa Rica, Kenya and Nepal – among other destinations – saw rapid market gains in the 1980s and early 1990s.

These companies began to realize that they could take the initiative to conserve the environment by sponsoring local conservation groups at the destinations they visited or raising funds for local causes. So many individuals with unique ideas and creative approaches were involved in the early days that it was rare to see ecotourism carried on the same way twice.

Today many ecotour operators around the globe are working to create well-planned, interactive learning experiences that introduce small groups of travellers to new environments and cultures, while minimizing negative environmental impacts and supporting conservation efforts. These service providers can be local or international. They range from seasonal community run and family operations to medium scale outbound operators with annual revenues in the millions of dollars.

Of course, many companies operating throughout the world offers what is falsely labelled ecotourism. Sometimes these companies even benefit from governments because of their minimal environmental standards. The damage done by companies that relocate indigenous people in order to build golf courses (under the guise of ecotourism) has clearly been considerable. It is difficult to quantify what percentage of the industry is seeking to meet sustainability standards. The argument over how beneficial the ecotourism industry is, or how harmful it can be, is therefore difficult to resolve. It is likely that this industry will have both sustainable and unsustainable components for years to come. Whether or not this industry realizes ecotourisms potential benefits is a matter of opinion, but without question there is a continuing need to closely monitor how the industry is evolving, particularly in rural areas and among peoples that lack genuine land and other legal rights.

Ecolodges have emerged in the marketplace in the last five years. Their definition and guidelines have only recently received international review

Starting points for government ecotourism programmes

1. Establish an Inter-Ministerial Working Group that combines the expertise of the tourism and environment ministries and the agency or agencies charged with rural development.
2. Empower and fund a secretariat of experts working in the fields of natural resource management, community development and tourism.
3. Develop a participatory planning programme that involves stakeholders from throughout the country or region, including rural and indigenous communities.
4. Establish objectives for a programme based on stakeholder input, such as increased rural economic development, increased budgets for management of protected areas, and better management of visitors in fragile areas.
5. Develop a training programme for the tourism ministry and other relevant government personnel.
6. Review transportation corridors, trail systems, small-scale non-commercial river transportation systems, small aircraft access and other infrastructure necessary to develop ecotourism. Develop a transportation plan that facilitates good ecotourism itineraries, stresses low environmental impact, low energy use, visitor safety and scenic qualities, and provides quality visitor information.
7. Develop both policies to meet objectives and budgetary mechanisms to fund them. Seek legislative approval where necessary.
8. Develop a visitor information programme and niche market plan.
9. Develop a long term community training programme to develop community participation in ecotourism development.
10. Establish biological and social carrying capacity benchmarks through research that establishes long term monitoring of tourism impacts.
11. Develop finance mechanisms for the development of small ecolodges, which provide incentives to conserve land and train local people.
12. Develop an information base and best practice information through university research programmes on issues of ethical delivery of ecotourism products, certification and visitor management plans.
13. Develop land-use planning capacity in local municipalities through exposure to the benefits of zoning and regulatory techniques. Limit dense development in buffer zones of protected lands and other important ecotourism attractions.

(Mehta, et al., in press). A recent study of 172 lodges in 33 countries (Sanders and Honeyman, 2001), the only such study performed to the business formulated by ecolodge owners worldwide, shows that the majority (about 70%) of ecolodges built in natural areas in developing countries around the world are locally owned. In fact, there is little evidence that ecolodges are becoming large corporations. Businesses earning substantial profits for foreigners. The large majority of the lodges studied (87%) have fewer than 30 rooms, and over 30% operate with profits of less than 10%.

The management and operation of an ecolodge differs from that of a conventional hotel for many reasons, which undoubtedly helps account for their small size and low profitability. According to *International Ecolodge Guidelines* (Mehta, et al., in press), ecolodges are most often found in wilderness areas that are the least developed and remote areas in any country and therefore the last places to receive government investments in roads, health, education, electricity, potable water, staff, etc. This poses a special challenge to the ecolodge owner or manager. The most successful ecolodge developers by supporting local communities in a long-term development programme and in putting their own land under strict management plans with a minimum of outside assistance.

Overall, the part of the ecotourism industry that is working to achieve green standards is developing its own ethics and the most highly individualistic approaches to achieve sustainable development results. At present, the ecotourism industry is still dominated by small to medium-sized, owner-operated businesses that seek to integrate their sustainability values into all the industry disciplines, have a strong sense of the importance of social and environmental goals for their businesses.

The challenges ahead for improving the green performance of the ecotourism industry will primarily involve a process of working with small, individually owned businesses that operate in remote areas and helping them find solutions to the difficult problem of working profitably (but equitably) in areas that often lack the full range of government services or oversight.

Government policies for ecotourism

Governments have an extraordinarily important role to play in developing ecotourism, yet their role is complex and must be defined by a variety of agency players. Several countries have adopted specific ecotourism strategies. The first national ecotourism plan in the world, prepared for the Australian government in 1994 and already mentioned above, is the most important example of national ecotourism planning.

In Australia, the decision to formulate an ecotourism strategy was made in response to growing international interest and the increasing profile of Australia's natural environment as a tourism attraction. Working on behalf of the federal government, a small team undertook a literature review and proceeded to public consultations which involved local government agencies, natural resource managers, tour operators, tourism

marketers, planners, conservation and community groups, developers and indigenous Australians. Workshops were convened around the country, and a call for written submissions was published in the national press.

In Brazil, the government decided to address the environmental threat of rapid tourism growth by establishing the Interministerial Ecotourism Task Force in the early 1990s. This group produced *Guidelines for an Ecotourism National Policy*, which was endorsed and released by President Fernando Henrique Cardoso in March of 1995.

A technical cooperation programme was developed for the Amazon region and signed in 2000 by President Cardoso. The Inter-American Development Bank (IDB) loaned US$ 13.8 million to establish a framework for implementing the investments necessary for the new Brazilian Amazonian states to respond to pressure themselves to manage wisely ecotourism areas. The loan package, called Proecotur, is a per investment for a major US$ 300 million initiative to develop the country's Amazon region for ecotourism. The pre-investment stage will proceed by having all nine Amazonian states develop ecotourism strategies, including the following measures:

- strengthening the legal framework of these states to regulate tourist activities;
- preparing a detailed market study;
- developing 19 management plans for existing and newly established protected areas;
- making key joint investments in ecotourism facilities and sites;
- preparing 19 pre-feasibility and feasibility studies for infrastructure projects;
- implementing training and capacity-building programmes throughout the region; and
- creating a website to keep the public informed on the project's progress.

Because there is a growing ecotourism market, governments are expressing increasing interest in attracting ecotourism as part of their tourism development programmes. The above examples give a good idea of the importance of government planning in the process of developing an ecotourism market. While no guidelines for government planning of ecotourism exist, the following starting points on page 11, developed by the author, provide a checklist for governments interested in developing an ecotourism programme to bring to the table for participatory, multi-stakeholder review.

Increasing benefits for local people

Community-based ecotourism (CBE) is a growing phenomenon throughout the world. The CBE concept implies that the community has substantial control and involvement in the ecotourism project, and that the majority of benefits remain in the community. Three main types of CBE enterprises have been identified (Woodley and Drumm, 1999). The purest model suggests that the community owns and manages the enterprise. All community members are employed by the project using a rotation system, and profits are allocated to community projects. The second type of CBE enterprise involves family or group initiatives within communities. This is based on collective participation. The third type of CBE is a joint venture between a community or family and an outside business partner.

At present there is a large demand, especially in Latin America, for assistance to communities seeking to develop local ecotourism products. The Nature Conservancy's Latin America division reports that of their 60 local NGO affiliates, 36 have requested assistance with ecotourism feasibility studies (Epler Wood, 1998). This is just one example of what is well known throughout Latin America: ecotourism has been chosen by thousands of communities in the region as their preferred development alternative.

The NGO community has a role to play in assisting local communities with viable sustainable development projects. However, inadequate expertise and understanding of the ecotourism product has led to inappropriate assistance patterns.

Some of the primary problems are:

1. lack of cooperation with the private sector that is already offering ecotourism in the destination country;
2. poor communication between NGOs and the private sector;
3. use by NGOs of their tax-free status to offer products that are in direct competition with the private sector;
4. business and tourism planning services often communities are targeted by NGOs for ecotourism development;
5. top-down, bureaucratic management of projects where the intent is to foster community participation.

The most important new trends in development assistance include better pre-assessment of community needs and community traditions, a full analysis of land tenure and other legal issues relating to long-term access to the political process, training that is more targeted at community needs, research on the market for community ecotourism, paired with efforts to develop

Ecotourism in development cooperation

Wolfgang Strasdas, Consultant, Palmstr. 13, D-80469 Munich, Germany
(strasdasw@aol.com)

Definitions

Although there are many different ideas on the subject, the author perceives "ecotourism" as a development concept with a distinctive set of objectives and not necessarily as a market segment (which would be referred to as "nature tourism"). Ecotourism is therefore seen as a sustainable form of nature tourism that strives to achieve environmental, social and cultural compatibility and to generate economic and other benefits, especially for local rural people and nature conservation purposes.

Ecotourism's importance in developing countries

As a sustainable development concept in rural areas, and to support nature conservation, ecotourism is especially important in developing countries. To begin with, most biodiversity hot spots[1] as well as many types of natural landscapes and wildlife are found in the tropics. These features are the natural resources on which ecotourism depends.

In view of the very difficult situation of nature conservation, and the widespread poverty of rural people in most developing countries, the need for the benefits expected from ecotourism is particularly urgent. There is usually a large percentage of protected areas, but these areas are often not much more than "paper parks" suffering from low levels of acceptance (e.g. there may be poaching, timber cutting and numerous other encroachments) and general government failure. Support for conservation by national governments is marginal, and most protected areas in developing countries depend heavily on international funding.

This dilemma has been recognized by the conservation community. There is now a broad consensus that biodiversity can only be conserved by attaching an economic value to it, with ecotourism being one of the most significant possibilities for generating direct income through sustainable use of natural areas (both for agencies managing these areas and for local people living in the buffer zones).

On the demand side there are corresponding trends. "Third World" tourism has been growing steadily. There is increasing demand for "alternative" forms of tourism, including nature/ecotourism. In many developing countries tourism has become an important source of foreign exchange earnings.

Shortcomings of ecotourism in developing countries – a critical review

In view of the far-reaching expectations associated with ecotourism, it is clear that this very ambitious concept requires not only professional business management but also a high level of steering and cooperation among many stakeholders, especially the private sector and conservation agencies (both government-related and NGOs). In most developing countries the needed structures or capacities are not in place. The same government failure that

appropriate linkages to the global marketplace and development of improved systems to protect communities from competing land uses, such as logging and oil exploitation.

One of the key issues in ecotourism today is the extent to which this portion of the global marketplace can actually represent a different kind of responsible commerce. A growing number of articles assume that ecotourism will use the same model as much of the rest of the global marketplace, and that it will, by default, disempower local people for the purpose of selling off their land and culture to the highest bidder.

Ecotourism can be a form of commerce in which local people actively participate in the formulation of social "contracts" that go well beyond standard business formulas. Given that the great majority of ecotourism businesses are locally owned (Sanders and Halpenny, 2001) and that socially conscious owners are frequently involved, communities can achieve more than the status quo. The involvement of NGOs and the development assistance community can frequently help reverse top-down business patterns.

Participatory decision-making processes can make a difference. These processes are being used increasingly more to regions where communities have been sidelined in the past.

Certainly no new economic development system can completely transform the social and political context of a people or region. Finding genuinely equitable formulas for responsible commerce between cultures and between those in the North and the South can at least open the door to change. But honest efforts to find increasingly equitable approaches to the development of ecotourism continue.

Conclusion

The ecotourism principles, practices and policies reviewed in this article represent a consistent and long-term approach to achieving sustainability. There is little evidence that ecotourism is "big business." It remains a specialized market niche occupied by a variety of small businesses, NGOs and interested communities. Misidentifying ecotourism by businesses and governments seeking to cash in on its perceived market allure is a very thorny problem which will not disappear without better regulations and international standards for certification.

Progress on certification of ecotourism is slow and must be governed by realistic efforts to provide proper oversight and guidelines for the certification process. No researcher or author really knows what proportion of the ecotourism market niche genuinely represents a sustainable development alternative. Ecotourism businesses, NGOs, government and development agencies all need to properly analyze and investigate better ecotourism policies that result in both conservation and community benefits.

While much work needs to be done to achieve acceptance of new guidelines and policies, there is reason to believe that ecotourism can improve agriculture's standards for community development which have traditionally had low development priority, that it can help governments diversify their tourism economies with a more sustainable alternative, and that it can assist communities in finding new formulas to gain social cachet while they respect their cultures, intellectual property and legal rights.

Ecotourism is commerce, and as such it is a model form from other forms of development. It offers good opportunities for win-win growth scenarios. The challenge is to ensure that all those involved in ecotourism benefit.

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applies to nature conservation also applies to ecotourism. It therefore comes as no surprise that ecotourism has not lived up to its promises so far.

Most of what is called ecotourism is simply nature tourism. Nature tourism may have quite a few undesired impacts. In addition, most of nature tourism's expected benefits have not materialized. Roughly two types of nature tourism can now be distinguished in developing countries (**Table 1**).

This does not mean that ecotourism does not or cannot work. The fact that it can work is proven by a number of functioning model projects which have usually resulted from close cooperation among responsible ecotourism companies, conservation agencies and local communities. However, responsible, proactive and capable private businesses are rare and cannot be expected to entirely fill the vacuum left by governments. Developing countries need the support of international cooperation agencies in order to develop ecotourism to its full potential. So far, donors have provided this support to only a very limited degree.

Table 1
Uncontrolled nature tourism vs. small-scale ecotourism: characteristics and impacts

	Uncontrolled nature tourism	Small-scale ecotourism
Characteristics		
Attractiveness of access to destination	high (low)	variable
Type of landscape	accessible, attractive areas, mountains, open landscapes, combination with water	more remote, unique, high scenic quality, mountains, rainforest, water
Dominating stakeholders	national international tourism companies	NGOs, local government, communities
Turnover	high	low
Steering, planning	(almost) non-existent	(more) developed
Impacts		
Environmental	sometimes significant	insignificant
Social-cultural	sometimes significant	acceptable
Contribution to conservation	low	low
Generation of local benefits	low or unbalanced	low
Awareness creation	low	low

Tourism promotion by development cooperation agencies

Only a few inventories or analyses of tourism promotion in development cooperation (DC) have been carried out so far (see References below). The most comprehensive study on the status of ecotourism in DC policies and programmes has been performed by SECA on behalf of the French Fund for the Global Environment (SECA, 2001).[7]

Although every multilateral or bilateral donor is different, a number of common characteristics or features can be identified, at least among European and North American organizations. One is the history of tourism promotion by DC agencies. Basically, there have been three phases:

- Phase I: "classical" tourism promotion (financing of infrastructure, hotels, and marketing activities for conventional tourism) in the 1960s and 1970s;

Table 2
Elements that tend to be favoured or neglected when ecotourism is implemented

Favoured	Neglected
carrying capacity studies	economic feasibility/market studies
simple infrastructure (trails, camps)	hospitality training
training of guides	business management
simple brochures	marketing

- Phase II: almost total withdrawal from tourism promotion (after social and environmental problems occurred and economic benefits turned out to be disappointing) in the 1980s and early 1990s;
- Phase III: rethinking of tourism within the framework of sustainable development, albeit hesitantly, beginning in the mid 1990s.

No DC organization currently has a specific tourism or ecotourism programme, despite the importance of tourism in many developing countries and the official recognition of ecotourism's potential benefits by the UN Commission on Sustainable Development. Until recently, when this matter was discussed with donors, an undifferentiated, almost "fundamentalist" critique of tourism prevailed. Tourism does appear in some programmes concerning economic development, private sector assistance, poverty alleviation, and (most notably) biodiversity conservation, but no further specifications or official guidelines can be found.

This is all the more astonishing since ecotourism, in particular, has managed to "sneak" into development cooperation on the project level as a real if minor component. For example, almost 50 projects funded by the German Agency for Technical Cooperation (GTZ) have an ecotourism component, and almost all of these are concerned with biodiversity and natural resource conservation and rural development. This has led a number of GTZ staff to establish an informal working group. Still, on the policy level tourism is steadfastly rated as non-priority, without a single person (not to mention department) officially assigned to it. The same applies to other donors, such as the World Bank.

On the other hand, classical tourism promotion has not entirely disappeared. The European Union, for example, financed such projects until recently. Nowadays it is especially the International Finance Corporation and some of the regional and bilateral development banks that still finance relatively large-scale tourism investments, mostly in hotels. Although this is increasingly being done in the framework of sustainable development principles, there are no specific guidelines and no particular emphasis on best practice. The amounts of financing available under these programmes (loans) are much larger than those for the ecotourism components within "green" projects (grants or loans) and are usually not tailored to the multi-sectoral needs of ecotourism programmes and investments.

Typical weaknesses of donors' ecotourism projects

With no guidelines or coordination on the policy or programme level, it comes as no surprise that ecotourism is often dealt with in a haphazard manner on the project level. No development cooperation organization has yet systematically monitored or evaluated its ecotourism project components, but some studies (SECA, 2001; Strasdas, 2001) indicate that at this initial stage there are more failures than successes. Typical weaknesses when ecotourism is implemented as part of "green" projects include:

- a tendency to favour small-scale projects not connected to the overall tourism market or to the general conditions of a country;
- a certain preference for areas with a limited appeal to tourism, whereas highly attractive destinations are left alone (Table 1);
- lack of tourism-related professionalism among project staff and partners;
- little cooperation with the private sector, which is sometimes considered too "commercial";
- little consideration of long-term feasibility and possible target markets;
- overestimation of local people's capacities to manage their own ecotourism projects (frequent failure of community-based projects after support is withdrawn);
- implementation of isolated measures in the absence of a comprehensive strategy, since ecotourism is not sufficiently planned for in project designs and budgets. Measures taken tend to focus on certain aspects while neglecting others (**Table 2**).

A final note following this critical analysis: things are about to change. As was evident at a 1999 workshop organized by The International Ecotourism Society which addressed several US-based donors (World Bank Group, Inter-American Development Bank, USAID), most participants had at least recognized the importance of ecotourism and the degree to which it was being neglected. A few ecotourism projects that have incorporated some of the recommendations below are listed in **Table 3**.

Conclusions and recommendations

While it is not absolutely necessary to declare sustainable tourism (including ecotourism) a development cooperation priority, it should be officially acknowledged as an important tool for use in achieving overarching objectives such as biodiversity conservation and poverty alleviation. The adoption of consistent policies and guidelines in project design is mandatory if ecotourism's potential to help achieve these goals is to be used fully.

A cross-sectoral approach integrating economic development with conservation objectives and participatory planning is also necessary. Financial and technical cooperation programmes need to be adapted to the specific requirements of ecotourism projects (e.g. small- to medium-scale investments, community participation, training programmes, marketing support).

On the institutional level, DC organizations should create ecotourism (or sustainable tourism) departments with a coordinating and advising role. These departments may be small, as long as professional personnel are assigned to them. Specific tasks such as market research and marketing support could be delegated to specialized NGOs or consultants on a contractual basis. This is also an option for smaller donors dealing with ecotourism only occasionally.

On the project level, the following recommendations are made:

- Seriously assess the feasibility of ecotourism in a given project. Since the

Table 3

Examples of projects supporting ecotourism

Country	Name of project	Donors involved	Special features
Belize	Rio Bravo Conservation and Management Area	various American and British donors, private sponsors	educational and research-oriented conservation successfully managed by an NGO (Programme for Belize)
Brazil	Prodecotour	Inter-American Development Bank (IDB)	large-scale ecotourism programme covering the entire Amazon, financing infrastructure, private investments, marketing studies, private sector capacity building (in preparation)
Honduras	Ecotourism development in protected area system	UN Development Programme (UNDP)/ Global Environment Facility (GEF)/ World Bank	area selection according to tourism potential, sustainable facilities, training and promotion, NGO capacity building
Central America	Promotion of Sustainable Development through Tourism (FODESTUR)	German Agency for Technical Cooperation (GTZ)	facilitation of regional stakeholder cooperation, development of regional ecotourism routes (Ruta verde)
Cameroon	National Ecotourism Strategy	German Agency for Technical Cooperation (GTZ)	national ecotourism strategy focusing on stakeholder participation, protected areas and local communities (in preparation)
Namibia	Namibian Community-based Tourism Association (NACOBTA)	Swedish International Development Cooperation Agency (SIDA), Worldwide Fund for Nature (WWF)/US Agency for International Development (USAID), various European donors	community tourism development based on Community Area Conservancies, community funds, training and marketing
Tanzania	Cultural Tourism Programme	Dutch Development Organization (SNV)	development of ecotourism products in indigenous communities near protected areas, capacity building and institutional strengthening, marketing through National Tourist Board

Source: Wood 2001, Strasdas 2001, Steck et al. 1999

promotion of ecotourism is complex and demanding, it is better to concentrate technical and financial means on a limited number of promising projects than to disperse them.

- In implementing projects, conceive a comprehensive strategy that covers the entire range of necessary ecotourism aspects from participatory planning and product development to marketing and monitoring.
- Training programmes are a key component of successful ecotourism projects, with local communities, NGOs and protected area agencies as the main target groups.
- Create stronger links with the private sector, especially with committed individual companies. Public-private partnerships and joint ventures between tourism companies and local communities, NGOs and protected area administrations are particularly promising. Tourism businesses, many of which do not have sufficient knowledge of ecotourism, should be the target of training programmes.

It is to be hoped that the International Year of Ecotourism will create a sufficient dynamic facilitating the transition within development cooperation organizations from "clandestine" ecotourism promotion to clear policies and programmes.

Special thanks to Sylvie Blangy and Megan Epler Wood for providing specific information on certain development organizations.

Notes

1. "Biodiversity hot spots" is a term used by the IUCN (International Union for the Conservation of Nature), Conservation International and other conservation organizations to describe areas with exceptionally high biodiversity.

2. For information about the Fonds Français pour l'Environnement Mondial (FFEM) as well as the Fonds pour l'Environnement (the French Global Environment Facility), see www.*ffem.net* (site in French and English).

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Ecotourism in the Caribbean region: seizing the opportunity

Mercedes Silva, Sustainable Tourism Officer, Caribbean Tourism Organization, 2nd floor, Sir Frank Walcott Building, Culloden Farm, Christ Church, Barbados (msilva@caribtourism.com)

Summary

Ecotourism can generate income while contributing to the protection of natural and cultural resources. It is especially appropriate in protected and remote rural areas. This article focuses on initiatives taken in the Caribbean region (e.g. by Belize, Bonaire, St. Lucia, the Cayman Islands, Cuba and Venezuela) to make the tourism industry more sustainable.

Resume

L'ecotourisme peut a la fois produire des revenus et contribuer a la protection des ressources naturelles et culturelles. Il est particulièrement indique dans les zones protegees et les zones rurales isolees. L'article examine les initiatives prises dans la region des Caraibes (notamment Belize, Bonaire, Sainte Lucie, les iles Caimans, Cuba et le Venezuela) pour rendre le tourisme plus compatible avec un developpement durable.

Resumen

El ecoturismo puede generar ingresos y al mismo tiempo contribuir a la proteccion de los recursos naturales y culturales. Es especialmente adecuado en las zonas protegidas y en las zonas rurales remotas. Este articulo describe las iniciativas tomadas en la region del Caribe (Belice, Bonaire, Santa Lucia, Islas Caiman, Cuba y Venezuela) a fin de lograr que el turismo se convierta en una industria mas sustentable.

The natural and cultural resources with which the Caribbean region is blessed have made it the world's most popular warm weather destination. The fact that it is very fortunate to have tourism as a development option could be taken as the starting point for an extensive discussion concerning tourists costs and benefits.

All indications have been that the region's dependence on tourism for economic development – if not survival – is likely to increase in the immediate future, as other economic sectors encounter a hostile competitive situation. The good news is that Caribbean countries have a comparative advantage in an industry where world demand has been almost unlimited, and where this region has demonstrated creditable industry performance over the years. The bad news is that 1) the Caribbean faces fierce competition as the world's premier warm weather destination, and 2) regional tourism plans have been more focused on "growing" than on "developing" the industry, and therefore countries must address several environmental and social problems in addition to possible loss of market share.

Tourism growth vs. tourism development

As the Caribbean is the most tourism dependent region in the world, tourism stakeholders are faced with immense challenges: maintaining the tourist flows necessary to guarantee economic stability; ensuring proper use of resources for the benefit of visitors and inhabitants; and ensuring that the resources that now attract visitors will continue to exist and will continue to attract them. If the tourism environment relationship can be considered an infinite circle, this is certainly the case in the Caribbean region, with its many islands of all shapes and sizes.

The question remains: What does the Caribbean want – tourism growth or tourism development? If we say development, how can we ensure sustainability? Ecotourism has been recognized as a viable form of sustainable tourism development. Its capacity to generate economic benefits by contributing to the protection of natural and cultural resources (and involving local communities) has made ecotourism an alternative form of tourism, especially in protected and remote rural areas. This article focuses on the initiatives taken in the Caribbean with a view towards sustainable development of our tourism industry and the use of ecotourism as an instrument to achieve this goal.

Ecotourism is not a new concept in the Caribbean. With a generous tropical climate, landscapes that range from volcanic mountains, lakes and limestone cliffs to lush green hills, mangrove swamps and forests, not to mention our well-known sandy beaches and astonishing coral reefs (including the world's second and third largest barrier reefs), our region had been welcoming visitors in search of this natural world well before the term "ecotourism" was coined. The question is: was this really ecotourism?

As a way to help answer this question, the Caribbean Tourism Organization (CTO) convened the First Caribbean Conference on Ecotourism in Belize City in 1991. At the time it was recognized that "despite the growing importance of ecotourism and a general concern for the protection of the environment, the Caribbean region has, with the exception of a few countries, not made any serious efforts to examine the potential which this type of tourism may hold for the region or to capitalize on any advantages which the region possesses."

Five more conferences were organized subsequently, at which governmental tourism officers, hoteliers, cruise liners, NGO representatives, academics and students had the opportunity to discuss the issue in a regional forum. In 1997, the focus of this regional meeting was broadened to embrace not only ecotourism as a type of tourism, but the whole concept of making our tourism industry sustainable. Dominica hosted the First Caribbean Sustainable Tourism Development Conference in 1997; since then, three more meetings have been held in Trinidad and Tobago, Suriname and Guyana.

The past decade

In 1993, the Caribbean Environment Programme (Kingston, Jamaica) evaluated the competitiveness of ecotourism in the Wider Caribbean. The results of this study showed that while countries in the region supported the ecotourism concept, its significance varied among countries. The study revealed that ecotourism development was considered directly proportionate to the increase in traditional tourism, and that it seemed to be geared towards economic development more than preservation. Difficulties distinguishing between visitors interested in ecotourism activities or traditional activities were explained. These difficulties make it almost impossible to ascertain the economic benefits to be gained from ecotourism.

Regarding the institutional framework necessary for developing ecotourism, the study concluded that "although institutions are being established in the countries with the specific purpose of looking after tourism activities and/or the environment in general, the majority do not consider ecotourism as a section of the framework, but only as a part of their programmes." In general terms, the most important reasons for not developing ecotourism were identified as the lack of qualified staff, infrastructure, legislation, facil-

ities and institutional set up. With respect to the future, countries showed evidence of having more willingness than concrete or real plans.

It would not be fair to say that the situation existing almost ten years ago still exists today. Some progress has been made, but not as much as could have been, given ecotourism's enormous potential in the region. Progress is more evident in countries where ecotourism has been integrated as an important tool in national plans. Belize, for example, has established a system for collecting information on visitors to natural and heritage areas, both in terms of numbers and motivation. Most of its accommodations are distributed throughout the inland country and cays, in small hotels or guesthouses. Bonaire has one of the best managed marine national parks, which has put it on the map as one of the best diving destinations in the world.

In some other countries, despite the recognition that ecotourism is the best alternative for tourism development, separating it from more traditional forms of tourism has not been easy. Dominica, the "Nature Island of the Caribbean", is struggling between the ecotourism potential of its natural and cultural resources, which include the Morne Trois Pitons National Park (a UNESCO World Heritage Site), and the high impact cruise tourism that makes one of its ports every week. There is also the controversial issue of whether a larger airport should be built to facilitate the arrival of long haul aircraft.

What is happening today?

It is expected that orienting the tourism industry towards more sustainable development would facilitate resolution of the conflict between traditional tourism and ecotourism. Provision of a sustainable tourism framework for all tourism operations, not only those in protected or rural areas, would allow ecotourism to find its own dimension in the Caribbean and to be seen as a true option, not a merely a response to the market.

As a region that moves around tourism, the Caribbean has taken steps to define regional sustainable development guidelines. All stakeholders are playing their roles. The regional work carried out by entities such as the CTO, the Caribbean Hotel Association (CHA) through its subsidiary the Caribbean Alliance for Sustainable Tourism (CAST), the Association of Caribbean States (ACS), the Caribbean Natural Resources Institute (CANARI), the regional programmes of international entities such as the Pan American Health Organization (PAHO), and the environmental and development activities of the United Nations (e.g. those of UNEP and UNDP) have been complemented by different sized efforts in different areas at the national level.

A Regional Sustainable Tourism Policy Framework, prepared by CTO and approved by the Ministers of Tourism of the organization's 33 member countries, would facilitate the establishment of the Caribbean as a Sustainable Tourism Zone by harmonizing ongoing individual and regional initiatives. Under the guidance of CAST,

Belize

In the 1997 Visitor Expenditure and Motivation Survey, marine attractions were rated as the highest motivating factor for visitors to Belize (over 46%), followed by climate (38%), people/culture (32%), wildlife (29%), rainforests and Mayan ruins (27% each). Language, accessibility and cost were rated "very important" by less than 20% of visitors.

hoteliers in the region are seeking certification by Green Globe 21, an international environmental management and assurance programme, in recognition of their commitment to implement environmental management systems.

At this moment the Caribbean region is embarked in a project for the establishment and dissemination of quality standards to ensure healthy, safe and environmentally conscious tourism products and services. This project, Quality Tourism for the Caribbean (QTC), is a joint venture between the Caribbean Epidemiology Centre (CAREC) and CAST, with financial support by the Inter-American Development Bank/ Multilateral Investment Fund (IADB/MIF). Complementing the QTC's work, CTO has defined a Regional Sustainable Tourism Standards and Indicators Framework which, once approved by the Caribbean countries, would serve as a reference for establishing national tourism standards.

To contribute to the protection of our most precious resource, the Caribbean Sea itself, the region has begun to implement the Blue Flag campaign,

Bonaire National Marine Park

The Bonaire National Marine Park surrounds the islands of Bonaire and Klein Bonaire in the Netherlands Antilles. It covers an estimated 2700 hectares. The park's objectives are to protect and conserve marine resources while maximizing returns from both recreation and commerce.

The park is visited by approximately 28,000 divers per year, as well as an unknown number of snorkellers, sport fishermen, windsurfers and local people. It is self-financed through collection of diver admission fees. An annual tag costing $10 is sold to each diver. The park also collects fees from 41 public yacht moorings, with a charge of $10 for boats under 60 feet and $15 for longer ones. Specific projects are funded by outside agencies or donations.

The "Tortuganan di Boneiru" is a project to help local children learn to snorkel and teach them about the marine environment. This project has been running since 1995 and has successfully certified over 250 "tortuganan" as well as 15 "ScubaKids" to PADI open water/advanced open water level.

a voluntary certification scheme for beaches and marinas operated in Europe by the Foundation for Environmental Education in Europe (FEEE) since the middle 1980s. This scheme has proven effective as an environmental tool to enhance safety management and environmental quality. The Caribbean campaign is being operated by an inter-agency consortium made up of: FEEE, CAST (through QTC) and the Caribbean Conservation Association (CCA).

Countries' best practices

Throughout the Caribbean region, initiatives deserving recognition have been taken by individuals, communities, governmental entities and NGOs. Now, to be found under the ecotourism umbrella, these are only a few of the many projects in the region that illustrate the possibilities of this type of activity.

St. Lucia: the Heritage Tourism Programme

The Heritage Tourism Programme is an initiative of the Government of St. Lucia which is grant-funded by the European Commission (EC). It was initiated in 1998 to establish heritage tourism as a viable and sustainable component of St. Lucia's tourism product through facilitating a process of education, capacity building, product development, marketing, credit access, and promotion of environmental and cultural protection for the benefit of host communities.

The Heritage Tourism Programme operates at five levels. The public awareness and community mobilization element is centred around national campaigns focusing on economic and employment opportunities, and on the link between environmental management and sustainable tourism development. In the area of institutional strengthening and capacity building, the Programme seeks to increase the capacity of individuals and organizations within government, civil society and the private sector through training, technical assistance, strategic planning and organizational development processes.

Product development is another important component. The Programme offers a range of facilities and services aimed at facilitating the involvement of new, small entrepreneurs and creating new tourism product. It also collaborates with relevant national and regional partners to define and market the Heritage Tourism product, as well as promoting the island as a sustainable tourism destination. It advocates a supportive policy framework for community involvement in the development of heritage tourism.

Cayman Islands: the Cayman Brac Heritage Site and Nature Tourism Development Initiative

The Cayman Islands, located in the Western Caribbean, comprise three islands – Grand Cayman, Cayman Brac and Little Cayman. Grand Cayman, the largest island, is the focus of most tourism development, accounting for 96% of all stay-over visitors. However, tourists are increasingly discovering the beauty of the small Sister Islands. The Cayman Islands Ten Year Tourism

Development Plan (1992-2002) recognizes that the character and pace of these islands' development must be different from that of Grand Cayman, with its commercial, mass type product. It is against this background that the Cayman Brac Heritage Site and Nature Tourism Development Initiative began in 1998.

The objectives of this project are to present the defining areas of the natural and cultural heritage of Cayman Brac as a sustainable land-based nature tourism initiative, in order to increase business opportunities, create jobs, provide a living laboratory for schools, and protect the environment. Walking and hiking trails have been opened, scenic cliff walks, caves and overlooks marked, flora and fauna identified, and aspects of the social and cultural life of Cayman Brac presented.

The project covers the entire area (38 square kilometres) of Cayman Brac, which has a population of 1600. There are 35 natural and heritage sites island-wide, including around 15 kilometres of hiking trails through endemic tropical forest and xeric shrub lands, boardwalks to the wetlands, shore and scenic cliff walks, bird watching hot spots, marked tree trails, historic caves and monuments, a picnic park, swimming and snorkelling beaches, and an interpretative centre and park. The project already includes a museum, and a historic architectural walk is in progress. An estimated 2500 visitors per year have visited one or more heritage and natural sites since the project's inception. Additional funding is being sought to upgrade it and undertake further initiatives that would assist in ensuring its long-term sustainability.

Caribbean Regional Sustainable Tourism Policy Framework

Six policy objectives have been identified as providing opportunities for policy intervention:

- improving planning and management;
- maintaining and developing a high environmental quality standard;
- addressing socio-cultural and economic issues;
- encouraging conservation and sustainable use of natural and cultural resources by tourism enterprises;
- intensity training and in-service education for a more sustainable approach to tourism;
- involving local communities and other stakeholders.

Belize: the Lodge at Chaa Creek

The 330-acre private nature reserve on the Macal River has an internationally recognized Natural History Centre, Butterfly Farm, miles of trails for walking, birding, mountain biking or horseback riding, and access to Belize's richest Mayan archeological sites. The Lodge at Chaa Creek, at the Macal River Jungle Camp, has 19 cottage rooms and 10 *casitas*.

Fair Trade in Tourism

Patricia Barnett, Tourism Concern, Stapleton House, 277-281 Holloway Road, London N7 8HN, UK (tricia@tourismconcern.org.uk)

At Tourism Concern we are aware that there is a confusing array of descriptions of certain forms of tourism which imply they are solutions to the problems created by tourism development. In our opinion, such labels as "responsible tourism", "green tourism", "pro-poor tourism", "ethical tourism", "community tourism" and "ecotourism" divert attention from the serious need to create fundamental changes in tourism's structure and development.

Ecotourism has been promoted as the answer to sustainable tourism by the tourism industry, and by governments, since the Rio Earth Summit in 1992. Although ecotourism is well-meaning and promising at its core, since it aims to benefit the environment and local people, it has failed to address the structural causes of economic inequality, reinforced by the unfair trade practices of powerful tour operators and hotel chains from tourist-generating countries: these include ownership and land use issues, unfair payment and employment terms, low wages and discriminatory working conditions, management and marketing control concentrated in the hands of foreign operators, and high leakages. "Leakages" refers to money which leaves the destination to pay for services, goods and infrastuctural items that are imported to satisfy international tourism standards, as well as income that never reaches the destination because much of what customers have paid goes to suppliers within their own country.

This puts the onus on fairly traded tourism to tackle the structural imbalances that are invariably associated with tourism. At the crux of our thinking is the belief that the terms of trade between industrialized and developing countries are embedded in economic inequality. The fair trade movement worldwide addresses the disadvantages for developing countries in the world's trading systems. It creates opportunities for producers in the South to receive a fair share of the returns from the sale of their products. The concept of fair trade has been driven mainly by non-governmental organizations. Although still very small in world market terms, the fair trade concept is effectively challenging exploitative trade practices and bringing noticeable benefits to producers.

Tourism as a service industry is very different from the provision of such primary commodities as coffee and tea, which is normally tackled by the fair trade movement. The task is to understand what lessons can be learned from this driving force for change in market systems – given that tourism is an export, that it is considered a service industry, and that tour operators from the tourist-generating countries of the industrialized world are in the powerful position of controlling both demand and supply.

Our work in Tourism Concern over the past twelve years has highlighted the fact that the trade in tourism often reinforces social and economic inequality in the developing world. For example, 50-54% of the population of popular tourism destinations such as Kenya, Peru and Nepal were living below the poverty line in 1997. Receipts from tourism have not, however, contributed to the eradication of poverty, as financial leakage from tourism is as high as 70-85%. In Nepal, where climbers, trekkers and tourists compete with local people for the same scarce resources, it has been estimated that approximately 69% of the total expenditure of a mountaineering expedition was spent outside Nepal and that only 1.2% of the total remained in the mountain communities.

The economic inequalities of tourism and the consequent impacts are much in line with the opinion that poverty contributes to environmental and cultural degradation, and that addressing sustainability on the planet means addressing poverty.

We have defined **Fair Trade in Tourism** as a key aspect of this definition of sustainable tourism. It aims to maximize the benefits of tourism for local destination stakeholders through mutually beneficial and equitable partnerships between national and international tourism stakeholders at the destination. It also supports the right of indigenous host communities, involved in tourism or not, to participate as equal stakeholders and beneficiaries in the tourism development process.

The main premise of Fair Trade in Tourism is that:

- the people who live in the places tourists frequent should be consulted and should be in control of the process; and
- tourism operation and development should incorporate partnerships between service purchasers, developers, service providers and communities (as essential interest groups), based on mutual respect and equitable sharing of the costs and benefits of the investment (taking into account that the investment can be both financial and non-financial).

Tourism Concern has established an **International Network on Fair Trade in Tourism**. This is an open, widespread network of organizations from both the South and North with whom we are working and consulting. It is intended to provide the means for a more coordinated, international response at grassroots level to issues arising from the globalization of

Cuba's Nature Tourism Statistics System

In 2000, the Cuban Ministry of Tourism established the Nature Tourism Statistics System. Although this system has not been fully implemented (two provinces are not yet incorporated), the following figures give an idea of the extent of nature-based tourism in Cuba, the Caribbean's largest island:

- Fifty areas, covering 12,000 square kilometers, have been identified for nature tourism. This represents 11% of Cuba's national territory. The potential number of rooms in these areas is 6000 (today there are only 714). A total of 116 nature tour circuits and trails have been approved, and 20 more will be incorporated shortly.
- Over 500,000 tourists visited these nature areas in 2000, accounting for 30% of tourism arrivals. Expenditure on nature tourism was over $20 million.

Chaa Creek has pioneered natural history travel to Belize since 1980. Its goals are to establish a model of sustainable development by stimulating interest in the environment, natural history and local culture, and to demonstrate the long-term benefits of ecotourism over other, environmentally damaging development options.

Approximately 3500 people visit Chaa Creek every year. Hundreds of Belizean students visit the Natural History Centre and Butterfly Farm. The Lodge employs 70 local Belizean staff, mostly from nearby San Ignacio Town and the surrounding villages. Local sources are used for financing projects and new developments.

Chaa Creek uses solar energy to power rural telephone and radio. Two diesel generators provide electricity, the larger one runs during the day to meet peak demand. Water is pumped from the river to a 25,000 gallon tank, then gravity fed to the Lodge and staff and management facilities. Old generator oil is recycled for use as a wood fire starter and preservative for outdoor buildings. Solid waste is dealt with using septic tanks and soak-away systems.

Cuba: Las Terrazas Tourism Complex

Las Terrazas, which offers a new social rural experience, began in the 1960s. At that time the focus was primarily on reforestation through cutting terraces in degraded mountains. The complex was conceived as an integral project based on sustainable principles involving the local population, whose social and financial situation it aimed to improve. Terraces covering 1500 kilometres were created and 6 million trees were planted. 150 kilometres of roads were built, and "la Comunidad" (where the local population settled and currently lives) was founded.

tourism. The guiding principle for Tourism Concern has been to ensure that Network members from the South are included as crucial stakeholders in determining Fair Trade in Tourism. The Network's aims are to strengthen the bargaining position of local destination interest groups, facilitate equitable market access for small stakeholders, raise awareness among consumers, and influence international trade policy.

At present a Fair Trade in Tourism kite mark does not exist. A "kite mark" is a recognized symbol whose use is authorized when certain standards are achieved. Although a small number of exemplary model initiatives exist worldwide, it is not easy to compress the complex socio-economic and cultural issues at destinations into a few measurable indicators and establish credible monitoring mechanisms.

In the absence of a kite mark, Fair Trade in Tourism therefore needs to be considered as a long-term process towards a global shift in favour of more equitable tourism trade policy and stakeholder behaviour.

Fair Trade in Tourism focuses on five areas where change is necessary in order to achieve greater equality for destination communities:

- international trade agreements;
- the tourism industry (both transnational corporations and independent investors);
- destination community stakeholders;
- consumer behaviour; and
- destination government policies.

It is recognized that due to the diversity of local destination circumstances and the complexity of the tourism system, there is no one single model for implementation.

Integral to our thinking on fair trade and tourism is the role it can play in enabling the tourism industry to develop corporate social responsibility. Tourism Concern is convinced that the fair trade criteria are a strong basis on which the tourism industry can work towards reaching a commitment to corporate social responsibility. It is time for:

- consultations and negotiations to be equitable;
- businesses to be transparent and accountable through environmental and social audits;
- local residents to be employed in more than simply menial work, and provided with opportunities to develop their potential;
- training and development for managerial positions to take place at the local community level, if appropriate as part of a public, private and civil society partnership; and
- investors to be aware of and adhere to international, national and local regulations on planning, environment and corruption and to follow anti-corruption practices.

Fair wages and working conditions are also at the core of Fair Trade in Tourism. Wages and working conditions should reflect relevant international labour standards with regard to national minimum wages. There should be freedom of association, health and safety, no child and slave labour, and no discrimination, within the context of UN Declarations on Human Rights.

Consumers have a vital role to play. Ethical issues are increasingly directing our purchases and investments. Tourism consumers want to make a positive contribution to people's lives at the destination. It is Tourism Concern's job to help direct consumers towards ethical providers and enable them to understand what a powerful role they play in ensuring that maximum benefits go to everyone involved in their holidays.

Tourism Concern has just produced a glossy new consumer magazine, *Being There*, which is being distributed by Body Shop and the British Association of Fair Trade Shops. *Being There* is directed towards women, as research has shown that 64% of people researching holidays on the internet are women. And it is often women who are at the heart of the growing interest in responsible tourism.

Tour operators and guides often don't want to antagonize their customers and "spoil their fun" by being too moralistic, but their customers' fun will be spoilt if they feel ill briefed and if their experience is marred. Tourists will value being properly informed before and during their trip, in order to avoid misunderstandings and bad feelings between themselves and local people which may be caused by ignorance of the culture they are visiting. Tourism companies should be concerned about the "feel-good factor" produced by adherence to Fair Trade in Tourism criteria, enhancing the tourist experience and customer satisfaction.

Experience shows that tourists are often shocked and dismayed when confronted by the acute poverty surrounding some of the most luxurious tourism resorts. Fair Trade in Tourism cannot address all the causes of poverty or all the problems in developing countries. However, if tourists know that their hotel or tour operator is dealing with the issue of poverty by using fair trade criteria, they can at least feel some assurance that their money makes a positive contribution. Their service will also be enhanced, as the local people and employees at the destination are in control, well-trained, and paid properly.

We strongly hope that Fair Trade in Tourism will become an integral part of the sustainable tourism process and will not be viewed as yet another marketing ploy.

Tourism was introduced in 1994. The tourism complex was designed to improve the area's economy in a sustainable way, involving the local population, and to properly manage natural and cultural values.

Las Terrazas is located in the middle of the Sierra del Rosario Biosphere Reserve (declared a UNESCO Biosphere Reserve in 1995), which acts as a buffer. An Ecology Station was created in the complex to carry out environmental scientific studies.

Tourism is the complex's main activity. In addition to the 26-room Moka Hotel, there is a network of interpretative trails. In 2000, Las Terrazas received 30,000 visitors (30% more than in 1999). The tourism facilities are the most important source of income for the local population, including women. Other management areas are forestry, farming and animal husbandry, light industry, and social services such as health, education and culture.

Venezuela: Los Roques Archipelago National Park

Located in the Caribbean 166 kilometres due north of Venezuela's central coast, the 221,120 hectare Los Roques Archipelago has 42 cays surrounding a 400 square kilometre lake. There are a little over 1200 inhabitants. In 1972, this area was declared a National Park (IUCN Class II). In 1996, it was designated a Ramsar site. Its biodiversity with respect to ecosystems and marine species has therefore been recognized.

Due to the beauty of its landscape and its unique and original environment, Los Roques had tourism flows well before it became a National Park. Commercial fishing is also an important activity. In 1990, to coordinate the efforts of the various governmental agencies involved in managing the National Park, the area's authority was made the archipelago's highest government agency. The Strategic Plan for the Archipelago supports sustainable development and focuses on the importance of involving the local community in the park's two major economic activities, ensuring protection of its invaluable natural resources and that of its cultural resources.

Both local *roqueros* and visitors have benefited from the improvements made on the archipelago (e.g. regarding fresh water supply, sewage, electricity and solid waste management). In 2000, Los Roques reported a 49% increase in self-generated income; 93% of the area's total budget comes from self-generated income. While the rest of Venezuela experienced a significant reduction in international tourism arrivals, Los Roques showed a 1% increase. Domestic tourism had increased by almost 100%, with visitors mainly comprising family groups.

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Trends in coastal ecotourism in Southeast Asia

Poh Poh Wong, Department of Geography, National University of Singapore, Singapore 119260 (geowpp@nus.edu.sg)

Summary

There are increasing pressures on Southeast Asia's coastal resources due to the subsistence requirements of local communities, the need to conserve biodiversity, and recreational tourism. In such a context, coastal ecotourism can play an increasingly important role. This article surveys developments relating to coastal ecotourism in Thailand, the Philippines, Indonesia, Malaysia and Viet Nam.

Résumé

Les ressources côtières de l'Asie du Sud-Est subissent de plus en plus de pressions à cause des besoins en subsistance des populations locales, de la nécessité de préserver la diversité biologique et enfin du développement du tourisme de loisirs. C'est le type de contexte dans lequel l'écotourisme côtier peut jouer un rôle de plus en plus important. L'article passe en revue les progrès de l'écotourisme côtier en Thaïlande, aux Philippines, en Indonésie, en Malaisie et au Vietnam.

Resumen

Las presiones relacionadas con los recursos del litoral marítimo del Sudeste Asiático son cada vez mayores, debido a las necesidades de subsistencia de las comunidades locales, la necesidad de conservar la biodiversidad y el turismo recreativo. Dentro de este contexto, el ecoturismo del litoral marítimo puede jugar un papel cada vez más importante. Este artículo analiza los desarrollos relacionados con el ecoturismo en las costas de Tailandia, Filipinas, Indonesia, Malasia y Vietnam.

Southeast Asia is one of the world's fastest growing areas with respect to ecotourism development. There is a trend away from overcrowded beaches and resorts to more nature-based tourism. According to one Thai study, 30% of foreign and 67% of domestic tourists can be considered ecotourists. Malaysia has estimated that 10% of its tourists are ecotourists or nature tourists.

A variety of coastal ecosystems are available in Southeast Asia for development of coastal ecotourism (**Table 1**). Diving is the most important activity; others include canoeing and those activities normally covered under marine ecotourism. According to the Professional Association of Diving Instructors (PADI), Malaysia, Thailand and the Philippines are important areas for the potential growth of scuba diving in Southeast Asia. Sabah in Malaysia, for example, has already experienced healthy growth in diving in recent years, with 15,000 to 20,000 overseas divers annually.

The context of coastal ecotourism

Coastal resources in Southeast Asia are important sources of food for local villagers. Coral reefs provide half the animal protein in Indonesians' diet. While traditional harvesting has little impact on reefs, a minority of harvesters use harmful methods such as blasting or cyanide. This is still a problem, for example, in both the Philippines and Indonesia. The demand for aquarium fish and live corals has aggravated reef degradation. Coral reefs are also affected by pollution and sedimentation from mining and other industries. Mangroves are cleared for shrimp and fish ponds, overlogged for timber and charcoal, and converted to land for housing and industries.

Southeast Asian countries have systems (ranging from recently initiated to well-established) to protect their coastal resources in designated areas. Legislation exists but enforcement is often lack-

ing. Thus, in practice marine protected areas are exploited. For example, the Philippines and Indonesia have environmental laws but these are not enforced adequately. Biodiversity conservation is urgently required as damage to coastal resources becomes critical. In Indonesia, 6.49% of reefs are in excellent condition and 24.28% are in good condition. Reefs in western Indonesia are in the worst condition, compared with those in middle and eastern Indonesia. In the Philippines, 5% of the reefs are in excellent condition and 70% in poor to fair condition. Mangroves have suffered a similar fate. In Indonesia, they were reduced from 4.2 million hectares in 1982 to 2.7 million in 2000.

Historically, coastal tourism in Southeast Asia began with a low impact on coastal resources and generated benefits to the local community. But as demand has increased, unplanned or uncontrolled development has contributed to environmental degradation (e.g. at Pattaya Thailand), Boracay (the Philippines) and Kuta (Indonesia). Some rehabilitation measures have been taken, including use of planned integrated resorts. As the trend is towards more nature-based tourism, reefs and mangroves are seen as potential resources for coastal ecotourism development.

Increasing pressure on coastal resources arises from the subsistence requirements of local communities, biodiversity conservation and recreational demands from tourists. It is in this context that coastal ecotourism can play an increasingly important role. Various approaches have been developed.

Approaches to the development of coastal ecotourism

Although the private sector has often been associated with abuse of the ecotourism concept, there are some examples of good practices in coastal ecotourism involving environmental planning and social responsibility. These include the Sea-Canoe operation in southern Thailand and two resorts operated by Ten Knots in El Nido, North Palawan in the Philippines. These tend to be unique, high-end operations. Although not truly community-based, they are trailblazers compared with other private companies.

Marine protected areas are normally developed for biodiversity conservation, with protection measures to ensure conservation while allowing maximum compatible usage. In the face of continual destruction of resources in marine protected areas, one approach has been to develop community-based sustainable tourism. CBST is based on two concepts: community-based management, and alternative livelihood. According to the community-based management concept, regulatory power over natural resources is placed in the hands of resource users and stakeholders. Alternative livelihood focuses on providing a sustainable income, so that coastal residents need not resort to overfishing or use of destructive methods. If properly established, managed and promoted, ecotourism can generate increased income for coastal villages. The results are improved if ecotourism activities coincide with marine sanctuaries and other protected areas.

Fresh water being transported to a small island in a local boat at Mactan in the Philippines

Community-based sanctuaries have therefore been developed in Indonesia and the Philippines, with strong links to community-based ecotourism as an alternative livelihood. This has operated through various projects on biodiversity management (e.g. the Biodiversity Conservation Network in the Padaido Islands, Indonesia), conservation (e.g. Conservation International in the Togean Islands), reef management (e.g. COREMAP in Indonesia) and coastal resources management (e.g. CRMP in the Philippines and Provek Pesisir in Indonesia). Continuous injection of funds is normally required in order to bring a community-based ecotourism project to a critical level of self-sufficiency before it becomes fully successful.

Other approaches to protecting coastal resources and developing coastal ecotourism at the same time include adoption of villages by resort operators and patronage of villages (e.g. Nusa Tenggara in the Similan Islands, Thailand) by live-aboard vessels. Scuba certification agencies, airlines, hotels and equipment manufacturers can also support environmental agencies that contribute directly to the local people, in order to eradicate destructive fishing and ultimately save coral reefs.

Development of coastal ecotourism is not an easy undertaking. It requires investment, skills and marketing. However, it is suitable for small-scale enterprises, which are often thought to provide the maximum benefits to the local community in that facilities and services can be easily provided by locals. The small-scale enterprise is sometimes seen as community-based tourism. In the Gili Islands off Lombok, Indonesia, the success of a small-scale enterprise depends on a local entrepreneur, who can initiate, sustain, and act as diffuser for the rest of community. At one stage of its success, the government resettled the small-scale enterprises of Gili Trawangan to a defined area with individual lots. Other locals have moved to the disputed land north of the resettled site and imitated the success of the resettled area. The diffusion and imitation processes are important for small-scale enterprises.

Thailand: an ecotourism leader

Thailand has had a national commitment to ecotourism since 1993, beginning with the carrying out of studies and cooperation among agencies involved in tourism. Ecotourism policies and guidelines were made available subsequently, with many policies and plans placed under the responsibility of different organizations prior to 1998. Ecotourism's potential was recognized and it was included in the tourism plan for 1998-2003. Ecotourism is one of the components of the National Tourism Master Plan 2001-2010.

Thailand, the leader in ecotourism development in Southeast Asia, is noted for its hill trekking, scuba diving and nature tours, which started in the mid 1970s. Coastal ecotourism takes place in the provinces of Chon Buri to Rayong, Chanthaburi and Trat on the east coast of the Gulf of Thailand; Surat Thani, Chumpon, Phetchaburi and Prachuab Khirikhan on its west coast; and Phuket, Krabi and Trang on the Andaman coast.

As much coastal ecotourism is provided by private enterprises, the "eco" label has been abused. There is a need to develop better standards and better control. For example, the SeaCanoe operation pioneered cave exploration in Phang-nga Bay in Phuket. This activity was copied by mass tour operators, resulting in a price war, and product quality was ruined. Because there is a strong private sector, community-based coastal ecotourism is absent in Thailand.

Thailand has the greatest number of protected areas in Southeast Asia. All parks are under the Royal Forestry Department (RFD). From 1993, marine national parks were managed separately from terrestrial parks but still under the RFD. Up to 1999, there were 21 marine national parks along the Andaman Sea and the Gulf of Thailand. They received about 2.5 million visitors, a third

of whom were foreigners and fewer than 15% of whom stayed overnight. The RFD's responsibilities include resource protection and development projects. However, there are constraints on their responsibilities and efforts, including inadequately trained personnel, lack of proper management, and lack of adequate facilities for visitors. Of particular concern is the need for clear development guidelines and the weakness of regulations relating to concessions for private investors. The thin line between conservation and tourism has become an issue, as the Tourism Authority of Thailand (TAT) provides funds for the RFD to build additional tourist facilities in 19 protected areas.

The marine parks in southern Thailand are a top priority for development because of their strong potential. Last year entrance fees doubled for foreigners, but for Thais they remain low and have not changed. The increased fee provides ecotourism revenue. It is also part of a wider strategy to reduce the number of tourists, whose impact on the parks is beginning to be negative. For example, the popularity of Phuket as a tourist destination has affected marine parks from Phang-nga Bay to the Surin Islands. During the peak season, the Similan Islands are overcrowded due to live-aboard tours.

Encroachment by neighbouring villagers and illegal developers is still a major problem in the protected areas, e.g. Koh Samet, Phuket and Krabi. Encroachment has intensified in recent years. Legal action has been taken by the RFD. Unable to remove all the developers on Koh Samet, the RFD has proposed legalizing the remaining ones on short leases. However, given past park mismanagement and the drive to develop ecotourism, legalization of illegal developers may not be a suitable measure as it may seen as encouraging further encroachment.

More power has been vested in provincial and local areas regarding tourism development. In March 1998, the government established tourism promotion and development committees for provincial and local areas (*tambon* administrative organization). These facilitate development and management of coastal ecotourism, since *ad hoc* subcommittees on ecotourism can be established within this structure. The new administrative structure replaces a previous liberal system with few or no controls. The *tambon* administrative councils now have greater authority to control the use of local natural resources.

Thailand recently completed a comprehensive study of coastal ecotourism covering 23 coastal provinces. With respect to ecotourism potential, they were ranked as follows: two ranked "highest" (Phang-nga and Satun); four ranked "second" (Surat Thani, Trang, Krabi and Phuket); four ranked "third" (Chon Buri, Trat, Chumphon and Prachuab Khirikhan); six ranked "low"; and seven ranked "lowest".

The most acute need is for management, preferably based on community participation.

Table 1
Assessment framework for coastal ecotourism in Southeast Asia

Coastal ecosystem	Sensitivity to impact	Ease of management	Local participation in development
Sandy beaches	low	high	low
Coastal dunes	high	high	low
Rocky coasts/caves	medium	medium	medium
Small islands	high	medium	high
Coral reefs	high	medium	medium
Sea grasses	medium	medium	medium
Mangroves	high	low	medium
Coastal forests	medium	high	high

Source: Adapted from Tourism Authority of Thailand, A Study to Determine the Pattern of Marine Ecotourism Management: Summary, 1998

Five major areas have been identified for development. In order of priority these are: 1) the Andaman Triangle Group (Phuket, Phang Nga and Krabi); 2) the Surat Thani coast and islands; 3) the Trat Group; 4) the Satun-Trang Group; and 5) the Sam Roi Yot Group.

The study identifies five new types of area management for utilizing tourism resources, each to be conducted according to the laws and regulations formulated by the agency responsible for such areas. These are: 1) owner-operated; 2) leasing; 3) concession; 4) joint venture; and 5) community-operated. Thus, a formal structure for community-operated ecotourism is included. Thailand has been a pioneer in coastal ecotourism, with wide experience, and coastal ecotourism is still evolving with ongoing studies. Valuable lessons could therefore be provided for other countries.

The Philippines: great potential

In the mid 1990s, Conservation International identified the Philippines as a country with tremendous ecotourism potential. It urged the government to develop ecotourism products. Clear and strong action was taken by the government with the passing of the National Ecotourism Act 1998. This Act sets out the institutional framework for a national ecotourism strategy, to be supported by a programme and a network of sites to be identified as National Integrated and Protected Areas (NIPAS) as well as other areas. A national policy-making body, the National Ecotourism Development Council (NEDC), has been created to establish the national strategy and is supported by regional committees. The first national ecotourism congress was held in 1999 to finalize a national ecotourism master plan. Executive Order (EO) 111 provides operating guidelines for ecotourism development in the Philippines.

While the national ecotourism master plan is being finalized, the Department of Tourism (DOT) has identified four locations for ecotourism, three of which are islands (Bohol, Guimaras and Camiguin). Bohol is marketed by the DOT as a prime ecotourism destination because of its diving sites and beaches. The DOT has also identified Coron Island (Palawan) and El Nido Marine Reserve (Palawan) as marine protected areas suitable for coastal ecotourism. In 1998, several choice ecotourism spots were designated National Integrated and Protected Areas (NIPAs). These include Olango Island, with a wildlife sanctuary of about 1000 hectares.

Palawan has been well marketed by the ecotourism private sector and was recently identified in a study by the Japan International Cooperation Agency (JICA) as an area that will receive approximately $200 million in tourism development investment in the next decade. To some extent, Palawan's successful ecotourism image is the result of collective environmental awareness efforts. The province has been environmentally protected since 1992. The government (Palawan Council for Sustainable Development), city government (Puerto Princesa), NGOs and Palawan residents are involved in environmental protection. There is zoning of land and marine areas for tourism activities. Despite the higher awareness of environment, there are still some problems such as lack of enforcement, especially in the private sector.

Coastal ecotourism within a CRM (coastal resources management) framework is exemplified by two successful initiatives. In the fishing community on Olango Island, southeast of Mactan Island, Cebu, CRM is used as a vehicle for an ecotourism project. CRM has successfully integrated elements of community-based ecotourism and developed it to a stage at which it can finance its own marketing operations, targeting hotels and resorts. This project serves as a promising model for the rest of country. Another CRM ecotourism project is located at Cambuhat, northwest Bohol. Here the project is based on Cambuhat's river, mangrove, estuary and lowland ecosystems, the community oyster farm along the river, and products made from local materials.

The Philippines' potential for strong development of coastal ecotourism is linked to increasing environmental protection, reef conservation, alternative livelihood and marine protected areas. It is currently being assisted by New Zealand in finalizing the national ecotourism plan by 2002, which will provide eagerly awaited details on the policy framework, guidelines and criteria and the network of ecotourism sites.

Indonesia: missed potential

Pariwisata 21 (Tourism in the 21st Century) is the Indonesian government's vision and mission for tourism. This master plan, finalized in 1997, integrates the policies of 27 provinces. Ecotourism is included, but there is some confusion (e.g. concerning permits for establishing homestays, which government office would have the authority to oversee ecotourism, management of ecotourism sites).

Although no national ecotourism strategy has been finalized, the Indonesian government issued new regulations in April 1994 dealing with the operation of nature tourism businesses in protected areas and requiring them to be implemented in accordance with the principle of conservation of biological natural resources and their ecosystems.

Five marine parks were seen as a source of ecotourism development, but they face problems of management, lack of trained park personnel and infrastructure, and no enforcement. An example is Bunaken National Park, the first to have a management plan with an emphasis on locals getting involved in ecotourism. Small family-run enterprises are based at two beaches on the island.

In contrast, Ujung Kulon National Park is an example of the introduction of ecotourism adding pressure to conservation. The park does not have enough security and lacks personnel and equipment. Blast fishing and coral theft still prevail. Its facilities are poor in comparison with private sector tourism development outside the park. Villages in the buffer zone are not considered in tourism development by the local government and park management. Pressure is exerted on core areas like Cibunar, Citamiya Beach, Handeuleum Island, the Cigenter River and Panaitan Island.

Future coastal ecotourism development may be associated with the national coral reef management strategy, the Coral Reef Rehabilitation and Management Program (COREMAP), which is supported by the international community. Phase I (1998-2001) has been extended for a further year. Its objective is to develop viable community-based management systems in pilot areas of Indonesia. If Phase I proves successful, Phase II (2002-2008) will implement pilot community-based management in the Taka Bone Rate Natural Park in South Sulawesi and the Lease Islands in Maluku. Take Bone Rate is to develop its management plan and assess the priorities identified by the local communities, including establishment of "regeneration zones", creation of credit and marketing cooperatives, development of value-added marine products, mariculture and ecotourism.

In 1999, a new step was taken with respect to marine policy when Indonesia's coasts and seas came under a single Ministry of Marine Exploration and Fisheries. This has implications for coastal ecotourism. As the political situation initially calmed down, the government wanted to rebuild the tourist industry by shifting the focus from land-based tourism to marine and ecologically based tourism (i.e. coastal ecotourism). The marine tourism policy was meant to attract investment in diving and cruising, especially in the eastern part of country, which has a large number of islands and has lagged behind the western part economically. However, political unrest has recently increased in eastern Indonesia.

With the 1999 law on regional autonomy, there has been a rapid devolution of government. Substantial powers have been given to *kabupaten/kota-madya* (regency/municipality) governments, of which there are about 350. With political reforms and foreign aid, scuba diving operators and villagers are taking measures to protect coastal resources. Villages have seized the opportunity for community involvement in resource management, as can be seen in reef protection efforts. Recent reef patrols in Komodo National Park, sponsored by scuba diving operators and The Nature Conservancy, were controversial as they divide the communities that welcome protection and those that resent intrusion by a foreign NGO. Such measures are more successful in the local communities around Bunaken National Park, which have charged $5 per diver, paid by the North Sulawesi Watersports Association. The villagers have gone so far to set up their own community-run sanctuary at Blongko, consisting of six hectares of degraded reefs and mangroves. Encouraged by aid from NGOs, such community-run marine sanctuaries, although they cannot be compared to national parks, are widely replicable at low cost and make coastal ecotourism more feasible.

Low-impact ecotourism development on Bunaken Island, Indonesia: mangroves have not been removed

It would take some years for Indonesia to develop a national ecotourism policy that also included coastal ecotourism. The country still faces conservation problems in marine parks (e.g. lack of commitment to staffing and operation), while development of coastal ecotourism has many obstacles to surmount.

Malaysia: steady development

Malaysia was the first in the region to have a National Ecotourism Plan, completed in late 1995. This plan lists existing and potential ecotourism areas, focusing on 42 areas and highlighting ten areas including some coastal/riverine ones. Malaysia adopted the IUCN definition of ecotourism. An action plan serves to implement, manage, strengthen and build the capacity of ecotourism areas. While functioning as a guideline for operators of (and participants in) ecotourism packages, the plan was set up to tap ecotourism's vast potential and is a tool for sustainable development of the tourism industry.

Malaysia's ecotourism products are varied and well-known, e.g. Taman Negara, Mount Kinabalu, the orangutan, and the caves and diving sites available on many islands and in Sabah. Many small islands have faced similar infrastructure problems, e.g. with water and supplies. Islands in marine parks in peninsular Malaysia are not necessarily protected. The need for security of another kind was made evident when tourists on Sipidan Island in Sabah were recently kidnapped.

Malaysian coastal villages are relatively well off and developed. Thus, there is no community-based approach in coastal ecotourism similar to that of the Philippines or Indonesia. In recent years the homestay programme has been introduced and implemented in Johor, Kedah, Melaka, Pahang, Perak and Selangor. This programme is based on the concept of bread and breakfast. Tourists stay in fishing villages or on farms. About 25,000 tourists have signed up.

Potential for coastal ecotourism exists in Sabah and in peninsular Malaysia. Sarawak has little coastal ecotourism, although this state is in the second phase of an ecotourism plan up to 2005. Malaysia continues to develop and upgrade its coastal ecotourism through more systematic monitoring of the quality of island ecotourism and homestay packages. Apart from the private sector, much depends on local governments, island development authorities and island management boards guiding islands' coastal ecotourism. For example, island carrying capacity needs to be determined. The popular Sipidan Island has imposed a ceiling of 80 visitors per day.

Viet Nam: a newcomer

Viet Nam is a relatively newcomer to the tourist industry. As the state is both the regulator and a key operator, governmental conflicts of interest sometimes arise. At the national level, the Viet Nam National Administration of Tourism (VNAT) and its Institute for Tourism Development Research (ITDR) are in charge of tourism. The state recently recognized ecotourism's importance. A National Ecotourism Strategy was developed in 1999. There are plans to develop tourism

in the coastal area during the next ten years, with the coast from Quang Ninh Province to Ha Tinh Province having the greatest potential.

Symptomatic of the problems and conflicts involved in overall tourism development, Viet Nam faces major problems with coastal ecotourism (e.g. environmental degradation, poor infrastructure, poor management, lack of investment). In the case of marine parks, problems include cross-management conflicts. There are unclear or conflicting responsibilities for tourism within protected areas, as national parks are under the Forest Protection Department (FPD) while tourism development is the responsibility of the provinces and districts. Few protected areas currently have the capability or means to plan for, manage and develop ecotourism. There are conflicts between national park managers and provincial or district authorities concerning the priorities for, and development of, tourism within protected areas.

There is a case for more international assistance (financial, technical, etc.) to demonstrate and promote the benefits of coastal ecotourism and conservation in Viet Nam. Conditions are suitable for ecotourism pilot projects to demonstrate cross-sectoral collaboration (involving key stakeholders, e.g. the FPD, national park management, local communities). One focus is on Halong Bay, declared a UNESCO World Heritage site in 1994, where development of coastal ecotourism is not based solely on limestone islands but also includes the floating fishing population. Within the bay, coral reefs face the threats of illegal blast fishing, pollution from coal mining, and shipping to and from the harbour. Halong Bay could be the first site in the country to show positive links with coastal ecotourism and conservation. Overall, Viet Nam still has a long way to go to develop sustainable coastal ecotourism.

Conclusion

Attention has been focused on various approaches to planning and developing coastal ecotourism, so as to maximize the benefits. However, it should be noted that successful coastal ecotourism can have negative impacts on local communities. As the number of ecotourists increases, there is a strain on the very resources being protected. This includes increased demands for water, food and waste disposal facilities, which are scarcely available to locals. Possible remedies include limiting numbers at a site, fees, etc. Carrying capacities must be determined.

Coastal ecotourism can be a high-quality product if matched by proper planning and developed. As it develops, some form of environmental code or labelling may be adopted to identify the quality of the product. Coastal ecotourism development becomes more defined as state, provincial and local policies and strategies become clear. In any approach to coastal ecotourism development, operation at the local level is seen to be increasingly important for locals (Table 1). A variety of approaches are available (depending on local conditions), in which involvement of stakeholders within government, NGOs, the private sector and communities is vital since each will be affected by the growth in tourism. There is ample scope for all to develop a sustainable coastal ecotourism, which requires careful planning, proper management, strict guidelines and regulations. ◆

Encouraging and rewarding best practice: Australia's Nature and Ecotourism Accreditation Programme (NEAP)

Meaghan Newson, Ecotourism Association of Australia, GPO Box 268, Brisbane, QLD 4001, Australia (meaghan@eastwind.com.au)

Summary

The Nature and Ecotourism Accreditation Programme recognizes and rewards genuine nature tourism and ecotourism operations in Australia. It is a voluntary, industry-driven initiative developed in consultation with operators, managers of protected areas and other key stakeholders. This article discusses the development of NEAP, its linkages with other programmes, and its standing in an international context.

Résumé

Nature and Ecotourism Accreditation Programme (NEAP) est un programme australien qui reconnait et récompense les activités d'écotourisme et de tourisme orienté vers la nature. Il s'agit d'une initiative volontaire, élaborée par le secteur du tourisme en concertation avec les voyagistes, les responsables de zones protegées et d'autres parties prenantes clés. L'article explique comment le NEAP a été élaboré, ses liens avec d'autres programmes et sa réputation dans un contexte international.

Resumen

El Programa de Acreditación de Ecoturismo y Naturaleza reconoce y recompensa las operaciones relacionadas con el verdadero ecoturismo y el turismo natural en Australia. Es una iniciativa voluntaria, inspirada en la industria, desarrollada conjuntamente con los operadores, directores de áreas protegidas y otros accionistas clave. Este artículo trata sobre el desarrollo de PAEN (NEAP), sus relaciones con otros programas y su posición dentro de la coyuntura internacional.

Australia's Nature and Ecotourism Accreditation Programme (NEAP) is the first scheme of its type in the world. It was designed to provide a mechanism by which the country's nature tourism and ecotourism sectors could continue to work towards the ideal of long-term environmental, socio-cultural and economic sustainability. The programme is a voluntary, industry-based initiative developed in consultation with key stakeholder groups. It aims to provide those working at the sector's coalface – the operators – with a way to gain knowledge of best practice principles, apply techniques within their own operations that contribute towards sustainability, and embark upon a programme of continual improvement.

NEAP was also developed to provide consumers and protected area managers with a way to recognize operators of genuine nature tourism and ecotourism products, thus conferring marketing and other operational benefits. NEAP is now in its fifth year of operation, with over 300 accredited products.

Development of the programme

NEAP was conceived and developed as an industry driven and run programme. Development of an accreditation programme was identified in Australia's *National Ecotourism Strategy* (DoT, 1994) as a key way to help ensure sustainability, raise industry standards, provide a means of industry self-regulation, and deliver marketing advantages to Australian ecotourism operators. NEAP was subsequently developed with the objective of providing:

- competitive advantage to operators with accredited products, via an easily recognized logo;
- financial savings to operators, resulting from industry recognition of accreditation (e.g. extended tenure in protected areas);
- baseline criteria against which operators can assess their compliance with current best practice principles;
- a framework in which operators can implement continuous improvement; and
- a means for consumers, community groups, managers of protected areas, and other industry groups to recognize genuine nature tourism and ecotourism products.

Seed funding provided by Australia's Office of National Tourism for initial establishment of NEAP was augmented by substantial in-kind support from key organizations and individuals. The programme is now owned by the Ecotourism Association of Australia (EAA). In administrative terms, it operates as a separate, self-funding non-profit entity. However, NEAP's viability in a wider sense (e.g. continued development and monitoring of standards) relies to a great extent on the commitment of a team of dedicated professionals, who give all or part of their time to the programme on a voluntary basis.

From its inception, NEAP has been a collaborative and consultative effort. The programme's initial and ongoing development has drawn on the collective expertise of individuals involved in fields as diverse as protected area management, guiding and guide training, environmental consulting, business accreditation, and tourism marketing. Another feature has been extensive communication and consultation with the programme's key constituents, operators and protected area managers, facilitated by pilot studies, workshops, newsletter articles and conference papers. The result is a programme that not only provides comprehensive criteria for assessing nature tourism and ecotourism products, but also seeks to create linkages with existing tourism business accreditation programmes and protected area licensing systems.

Management of NEAP

An honorary Panel[1] consisting of two EAA representatives, two tourism industry representatives and an independent Chair oversees the management of NEAP. The Panel usually meets monthly via teleconferencing to discuss accreditation applications and general management issues. A team of assessors, each paid a nominal sum per hour, reviews applications for accreditation and makes recommendations to the Panel. An Administrator, subcontracted by the EAA, manages day-to-day running of the programme.

Table 1
Principles of eligibility for NEAP accreditation

Nature tourism or ecotourism products	Nature tourism	Ecotourism	Advanced ecotourism
Focuses on directly and personally experiencing nature	✔	✔	✔
Provides opportunities to experience nature in ways that lead to greater understanding, appreciation and enjoyment	Optional	Mandatory but not necessarily core to experience	Core element of experience
Represents best practice for environmentally sustainable tourism	✔	✔	✔
Positively contributes to the conservation of natural areas		✔	✔
Provides constructive ongoing contributions to local communities		✔	✔
Is sensitive to and involves different cultures, especially indigenous cultures		✔	✔
Consistently meets customer expectations	✔	✔	✔
Is marketed accurately and leads to realistic expectations	✔	✔	✔

Source: NEAP, 2000.

Continuous improvement

A central tenet of NEAP is the inclusion of a continuous improvement programme, which allows it to remain current with (if not to lead) the latest best practice principles and technologies, as well as to respond to the changing needs of the industry. The first review of NEAP under this regime took place in 1999. During that period, a strategic plan was written to guide the programme's development into the new millennium, followed by a comprehensive review and redrafting of accreditation criteria. The revised programme, NEAP Edition II, was launched in March 2000. The first products to be accredited under this edition were approved in November 2000.

Prior to the launch of NEAP Edition II, the programme applied only to ecotourism products and was known as the National Ecotourism Accreditation Programme. However, during the review, a number of key issues were identified, leading to a decision to expand the programme's scope to include nature tourism products (hence the amended name). These issues are summarized below:

- *All* tourism in natural areas – not just ecotourism – should embrace the principles of environmental sustainability in order to ensure the long-term viability of the entire sector.
- Many operators, such as adventure tourism operators, reach a suitable standard of environmental sustainability although their products do not incorporate the full range of principles required of ecotourism (such as interpretation) and are therefore ineligible for accreditation. The fact that they operate a minimal impact product should nonetheless be recognized.
- Many protected area managers and government tourism officials have been reluctant to develop concrete strategies for accredited operators, due to a perception that the programme applies only to a small market segment. There has been a need to create a critical mass of product potentially eligible for accreditation, so as to encourage increased formal recognition of the programme and the subsequent delivery of real business advantages to accredited operators.

Early indications are that expanding the programme has increased its relevance to industry. Since NEAP Edition II was launched, managers of state government protected areas have indicated that they will provide extended tenure to accredited operators. There has also been unprecedented interest on the part of state and local government authorities in facilitating "all-of" workshops to encourage operators in their region to apply for accreditation en masse and then partake in cooperative marketing opportunities.

How are the NEAP criteria applied?

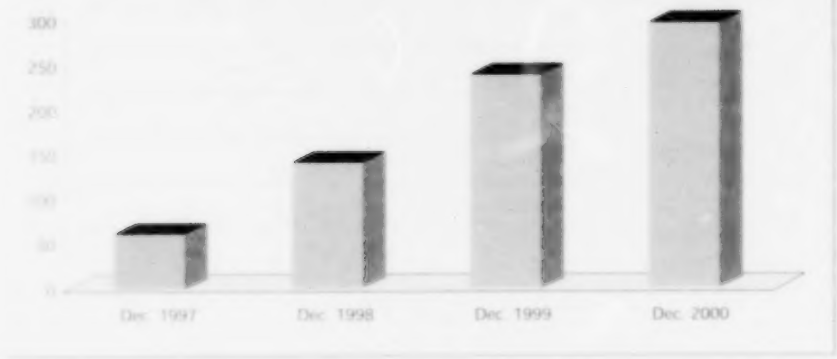
As mentioned above, NEAP was developed to apply to products (tours, attractions, accommodation) in two industry sectors: nature tourism and ecotourism. Under the programme, nature tourism and ecotourism are defined as follows (NEAP, 2000):

- *Nature tourism* is ecologically sustainable tourism with a primary focus on experiencing natural areas.
- *Ecotourism* is ecologically sustainable tourism with a primary focus on experiencing natural areas that fosters environmental and cultural understanding, appreciation and conservation.

Using these definitions as a basis, NEAP has developed a range of principles of eligibility for accreditation, each encompassing specific core and bonus assessment criteria against which products are assessed. As suggested by the definitions, ecotourism products must satisfy a wider range of assessment criteria than nature tourism, although products in both sectors must meet the same standard for natural area focus, environmental sustainability, responsible marketing and customer satisfaction.

The key "filter" for distinguishing ecotourism products from nature tourism is interpretation. Products must meet 100% of applicable core criteria to be eligible for nature tourism or ecotourism accreditation. A product meeting 100% of ecotourism core criteria as well as an additional 80% or more of bonus criteria (including further compulsory core criteria relating to interpretation) is eligible for advanced ecotourism accreditation. Provision is also made for discretionary bonus points, to be awarded for examples of innovative best practice. The principles of eli-

Figure 1
Number of NEAP accredited products 1997-2000



gibility for accreditation outlined in Table 1 further illustrate the programme's scope.

How is adherence to the criteria verified?

The application process for accreditation under the programme is based on self-assessment, augmented by a system of referee checks and audits. While NEAP has received some criticism for implementing an application system based on self-assessment rather than independent audit, this has proved the most effective means of ensuring that the programme remains as cost effective and non-threatening to operators as possible. Given that the vast majority of Australian ecotourism businesses are small if not micro in size, the expense associated with incorporating an on-site independent audit into the application process would simply put the programme out of their financial reach – thus negating the programme's aim of improving sustainability across the board.

Additionally, the scope of the criteria means operators do not always have all the necessary management practices in place that would allow them to seek accreditation immediately after expressing interest in the programme. For example, operators may focus heavily on the environmental management aspects of their businesses, to the detriment of other considerations such as providing interpretation of a suitable standard or engaging in consultation with traditional custodians. By taking the self-assessment document back into a business for a period of months (or sometimes even years), operators can implement the necessary improvements according to their own timeframe and budget before applying for accreditation.

Once accredited, a product is eligible to display the NEAP logo for a period of three years, after which the operator must undergo the application process again (an annual renewal and recommitment to the standard must be lodged during the three years). NEAP's continuous improvement programme means that each time operators reapply, a product is assessed under a more stringent set of criteria and so is not guaranteed to qualify for accreditation in its previous category. For example, a product accredited as advanced ecotourism under Edition I may be approved only for ecotourism accreditation under Edition II if no improvements reflecting changing best practice standards have been made in the preceding three years.

In March 2001, a large proportion of operators were undergoing the process of reapplying for accreditation under the NEAP II criteria. While it remains to be seen how many will renew their accreditation and/or meet the stricter criteria, the fact that so many businesses are still viable and operating under the same ownership is undoubtedly a pointer to the maturity of the Australian ecotourism sector.

A comprehensive, two-tiered audit programme has been established to augment the system of self-assessment. All operations are subject to a paper audit (usually scheduled to take place once every 12 months) focusing on one principle of NEAP and requiring further verification of the responses given in the original application. This audit is again based on self-assessment, but the level of detail required is both extensive and objective. For example, the 1999-2000 audit, which focused on the principle of interpretation, required specific information on criteria such as interpretive themes and techniques, sources of interpretive content and methods of guide training.

In addition to the paper audits, a system of on-site audits, ostensibly random, is also in place. To date, on-site audits have tended to occur on an *ad hoc* basis and to be undertaken by a Panel member or Assessor. Rather than being strictly random, these audits have generally been implemented in response to adverse feedback, problems encountered during the assessment process, or requests from operators interested in improving products. However, late in 2000 NEAP engaged the consultancy firm Gutteridge Haskins and Davey to develop an audit protocol based on the NEAP Edition II criteria. An extensive schedule of on-site audits was subsequently established for 2001.

Growth of the programme

Since the launch of NEAP Edition I in late 1996, the programme has enjoyed exponential growth (**Figure 1**). By the time the final applications were processed under the first edition, over 260 products from a diversity of ecotourism operations had been accredited, including many of the industry's high profile players (both new assessments and upgrading by operators of their accredited status). Some 80 products have since been assessed under Edition II.

However, it is significant that many of the new applications have resulted from industry workshops in which a NEAP Assessor and/or Panel member has been present to assist operators with the essentials of the accreditation process. Where as the self-assessment process seemed to present few significant problems under Edition I, anecdotal evidence suggests that operators find completing the Edition II application document challenging, due at least in part to the large time commitment involved.

It appears that the average length of time taken to return an application for assessment has increased substantially, compared with the three-month period usually required under Edition I. It should be borne in mind that in the "real world" of running a tourism business, NEAP applications compete with paperwork running to strict deadlines, such as completion of Goods and Services Tax activity statements and tourism award submissions. This often means that operators give the application process a lower priority, at least until they have an urgent promotional strategy to implement (such as production of a new brochure) and wish to use the NEAP logo. Nonetheless, such developments may signal new challenges for NEAP to develop communication strategies to assist and encourage operators during the application process.

Although the programme's overall growth has been exponential, **Figure 2** shows that this growth has by no means been uniform throughout Australia. Despite the emergence of many ecotourism destinations around the country, and the potential for operators in those regions to meet the NEAP criteria, Queensland far surpasses any other state in its proportion of accredited products. Notwithstanding its mature industry and undoubtedly excellent products, a major reason for uptake of the programme in this state has been the support of Tourism Queensland, the government tourism body. The only state tourism bureau to establish a dedicated environmental tourism unit up till now, Tourism Queensland has been highly proactive in developing strategies to promote NEAP to operators, the travel trade and consumers.

Given that NEAP keeps its fees as low as possible to encourage maximum participation, and so has an extremely limited marketing budget, support of this nature is invaluable in attracting operators to the programme and retaining their ongoing support. However, NEAP's success in one state has proved to be a double-edged sword at times, creating some reluctance among operators and marketers in other states to become involved in what they perceive as a Queensland based and dominated programme. This situation points to another key challenge for the NEAP over the short to medium term: the need to consolidate linkages and further encourage the support of state government tourism marketing bodies, so as to create across-the-board recognition of the programme.

Linkages to other programmes

NEAP operates as a stand-alone, sector-specific programme. Operators can apply for accreditation of their products without initially having to satisfy the requirements of other, broader industry schemes. However, the programme recognizes the importance of encouraging operators to participate in other industry schemes that will increase their professionalism. To this end, it has established a formal linkage with the Victorian business accreditation programme, whereby operators receive discounted fees if they undertake the two schemes in tandem. NEAP is also currently an industry partner, along with Tourism Tasmania and Tourism Council Tasmania, in a state-based pilot programme aimed at finding ways business and sector-specific accreditation can work together to the benefit of operators.

Another significant development has been the recent launch of the EAA's EcoGuide Programme, designed as a complementary initiative to NEAP. The EcoGuide Programme is a certification scheme intended to provide nature tourism and ecotourism guides that meet specified competencies and standards with voluntary, industry-based "qualification". The current edition of NEAP awards bonus points, counting towards Advanced Accreditation, to operations that employ certified EcoGuides in the delivery of their products. By the time NEAP Edition III is launched in 2003, it will be a core criterion that lead or head guides are either certified as EcoGuides or can otherwise demonstrate that they meet the standards for certification.

NEAP in an international context

NEAP has consistently generated a great deal of interest on the part of international researchers and tourism professionals. In November 2000, two members of the NEAP Panel were invited to attend a three-day workshop convened by the Institute for Policy Studies and the Ford Foundation on ecotourism and sustainable tourism certification/accreditation. The workshop was held at Mohonk, in upstate New York. Attended by delegates from 20 countries representing all the known ecotourism and sustainable tourism programmes, it provided an excellent opportunity to showcase and benchmark NEAP in an international context.[2]

The Mohonk workshop highlighted many of the NEAP's strengths, such as its formal linkage with the EcoGuide Programme and its ability to run as a self-funding operation. NEAP is also one of the few programmes that ascribes such fundamental importance to the integration of interpretation into ecotourism products. However, it was also apparent that some aspects of the programme, particularly in the area of social justice (e.g. workplace relations, appropriateness of land acquisition) could be interpreted as inadequate when looked at outside the Australian legislative context. These considerations have been taken on board by the NEAP Panel and will be acted upon in the event of NEAP being exported.

One major concern expressed by workshop delegates was that the proliferation of extant or proposed accreditation or certification programmes might ultimately be counterproductive to the cause of sustainability, due to inevitable variance in standards and resultant consumer confusion. Consequently, a key outcome of the workshop was the development of the "Mohonk Agreement", which provides an agreed framework upon which sustainable tourism or ecotourism programmes should be built.

This framework includes principles encompassing recognition of best practice, continuous improvement, community benefits, monitoring of standards, ecological and socio-cultural sustainability, responsible marketing, and the integration of interpretation into ecotourism products. Of course these principles already underpin NEAP, illustrating that the programme is, by an objective standard, at the forefront of ecotourism accreditation in a global context.

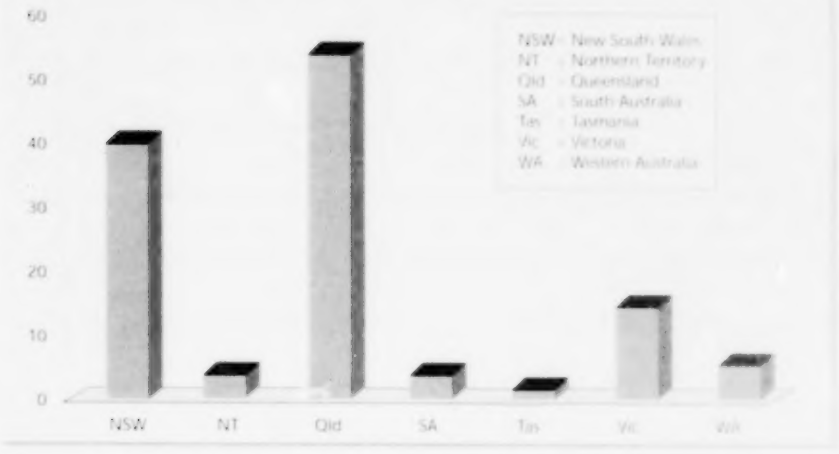
Conclusion

By many measures, NEAP is an undoubted success story. After five years the programme remains in a growth phase, is self-sustaining, and is receiving a high level of support for the standard of its criteria from operators and protected area managers. In an international context, it can truly be seen as a leader in the development of ecotourism standards. The keys to NEAP's success have been its consultative approach to the development of standards, its independence, and the high degree of dedication to the programme shown by the individuals involved in its development and management.

There are, of course, areas in which the programme has yet to reach its full potential. For example, widespread consumer recognition of the NEAP logo remains elusive outside Queensland, and the programme still has to garner the full industry support it needs to flourish in a number of areas of Australia (in many ways these two problems combine to create a "Catch-22" situation). However, it appears that expanding the programme's scope to incorporate nature tourism has created the critical mass of products needed to overcome these problems. It is not unreasonable to assume that NEAP will continue to experience significant growth well into the future.

Information on NEAP, as well as a pdf copy of the NEAP criteria documents, can be accessed via the Ecotourism Association of Australia's website (www.*ecotourism.org.au*). A complete copy of the Mohonk Agreement can be obtained from *mail@ecotourism.org.au*.

Figure 2
Percentage of accredited products by state



Notes

1. Until February 2001, NEAP operated as a joint venture between two membership-based industry bodies, the Ecotourism Association of Australia (EAA) and the Australian Tourism Operators Network (ATON). The establishment of the programme as a joint venture was initially a condition of the ONT grant. The NEAP Panel consisted of two members from each organization, moderated by an independent Chair. In light of changes in its strategic direction, ATON recently determined that accreditation no longer formed part of its core business and ceded ownership of NEAP to the EAA. However, both the NEAP Panel and EAA Committee recognized that the programme's independence was perceived as one of its key strengths, both in Australia and internationally. They consequently decided to create two independent Panel positions in place of the ATON representatives, and to retain the independent Chair.
2. Also see the following article by Martha Honey.

References

DoT (Commonwealth Department of Tourism) (1994) *National Ecotourism Strategy*. DoT, Canberra.

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Certification programmes in the tourism industry

Martha Honey, Sunnyside Productions, 15 Sunnyside Road, Silver Spring, Maryland 20910, USA (avirhoney@starpower.net)

Around the world, researchers have identified some 250 voluntary initiatives to set standards within the tourism industry. These include codes of conduct, awards, benchmarking, best practices, and some 70 eco-labelling and certification programmes offering logos or seals of approval. A growing number of these programmes are designed to showcase socially and/or environmentally superior practices.

In November 2000, the Institute for Policy Studies sponsored the first-ever international workshop on certification programmes for sustainable tourism and ecotourism. This three-day workshop, held at Mohonk Mountain House outside New York City, brought together some 45 practitioners, academics and NGOs involved in certification from 20 countries.[1] As we begin the International Year of Ecotourism, efforts are increasing to establish a single global certification programme, as well as the framework for a global accreditation programme for sustainable tourism and ecotourism businesses.

While tourism certification and eco-labelling are hot topics, they are also relatively new. Before the 1970s, little attention was paid by companies, governments or NGOs to the environmental and social impacts of the travel and tourism industry. The oldest tourism and hospitality industry labelling programmes, such as Michelin's guide to hotels and restaurants, measure cost, quality and ambiance, not environmental, socio- cultural and economic impacts. Green certification programmes within the tourism industry didn't begin in earnest until the 1990s. Increasingly, they have incorporated social and economic as well as environmental standards.

These certification programmes involve a combination of stakeholders – industry, consumers, NGOs, host governments and local communities – and cover a variety of geographical areas. They range from *global* programmes such as Green Globe 21, ECOTEL, and the International Hotels Environment Initiative (IHEI), to *regional* efforts in Central America, Europe and the Caribbean, to *national* certification and eco-labelling programmes in Costa Rica, Australia, New Zealand, Haiti, the Dominican Republic, Jamaica, Germany, Norway, the UK and other western European countries, to *state or provincial* efforts including in Guatemala (Peten), Canada (Saskatchewan) and Ecuador (the Galapagos Islands).

Unlike other green and socially responsible certification programmes for wood, bananas and coffee, where a chain of custody can be established running from the fields to retailers and consumers, the tourism and travel industry is multi-faceted and offers both services and products, therefore presenting a number of complex challenges. Most certification programmes target the easiest component, accommodations. Europe alone has about 30 programmes for accommodation services. However, a growing number of programmes cover other sectors, including Blue Flag for beaches and marinas and PAN Parks for protected areas. In addition to accommodations, Australia's NEAP also covers attractions, tours and tour guides.[2] Green Globe covers all tourism sectors, and Horizons in Saskatchewan certifies tours and attractions.

Two types of methodologies are used for these certification programmes:

- *process-based*, using internally created environmental management systems (EMS) tailored to particular businesses; and
- *performance-based*, using externally set environmental and often socio-cultural and economic criteria or benchmarks against which a business is judged.

Understanding the process vs. performance distinction is vital to any analysis of the integrity of a certification programme. Today the most popular EMS certification programme is ISO 14001, which is being used, for example, by Green Globe, IHEI, Green Flag for Green Hotels in Europe, and a number of individual hotels and chains around the world. While its standards are tailored to the needs of individual business, its drawbacks are considerable:

- it is costly (setting up an EMS usually requires outside consultants and can cost $20,000 to $40,000 for a medium-sized company);
- it is heavily engineering oriented;
- it is focused on internal operating systems, not on companies' social and economic impacts in the surrounding area or on how businesses compare with others in the field; and
- it is concerned only with *how* a company operates, not with *what* it does.

An increasing number of certification programmes are performance-based. They do focus on *what* a business does in a variety of environmental, socio-cultural and economic areas. These programmes tend to be less costly and permit comparisons among businesses, since all are audited based on the same criteria. Costa Rica's CST (Certification for Sustainable Tourism) programme, for instance, has a list of some 150 yes/no questions, while the Blue Flag programme has two sets of criteria for certifying beaches and marinas. One set contains the "essential" criteria, and the other contains "guideline" or desirable criteria. Increasingly, many of the newer or revamped programmes such as Green Globe 21 or NEAP represent a hybrid of process (management systems) and performance (standards or benchmarks).

All certification programmes, whether they use process or performance methodologies, have at least five components in common:

- *voluntary enrollment:* All certification programmes in the travel and tourism industry are currently strictly voluntary, i.e. businesses can decide whether to apply for certification. Most do so only if they believe that certification can bring them market distinction and increased profits.
- *logo:* All programmes award a selective logo, seal or brand designed to be recognizable by consumers. Many certification programmes use logos indicating different levels of achievement (e.g. from one to five suns or leaves). Most permit logos to be used only after certification is achieved. A notable exception has been Green Globe, which initially permitted companies that joined to use the logo immediately before any certification process began. As reorganized in 2000, Green Globe 21 now allows businesses or destinations that become members (and pledge to undergo certification) to use the logo before they have implemented actions and been externally audited. Once certified, a slightly different logo – one with a "check" in the middle – is issued. Many experts argue that this is still inappropriate, as such a slight distinction is lost on most consumers.
- *criteria that comply with or go beyond government regulations.* Process-based certification programmes require, at a minimum, that companies comply with local, national, regional and international regulations, while most performance-based programmes have criteria that always go beyond the regulations. One challenge is that regulations differ substantially from country to country in both rigour and enforcement. In poorer countries where tourism is expanding, but government regulations may be weak, certification programmes could help promote and ensure compliance. However, those in developing countries also argue that certification schemes, by setting criteria beyond the financial and technical capacity of many small and locally-owned businesses, may unfairly tilt their awards and logos towards international chains and foreign owned establishments.
- *assessment and auditing:* This can be first party (by the company itself, typ-

ically through completing a written questionnaire), second party (by industry associations) or third party (by independent firms or experts not connected with the company seeking certification or the body that grants certification and issues the logo). Third party auditing is considered the most rigorous and credible because conflicts of interest are avoided. There are an estimated 200 private auditing agencies around the world. For cost and staffing reasons, some programmes such as NEAP began with only paper (questionnaire completed by management, plus references) rather than site audits.

◆ *membership and fees:* Many programmes charge an enrollment fee to those seeking certification. This money is used for administration, and to support advertising and promotion of the logo and of the companies that are certified. They (or the independent auditing body) also charge fees for on-site assessment. Usually there is a sliding scale, with larger and more profitable businesses paying more. While some programmes have received start-up funds from government, industry or NGOs, one challenge is how to make certification programmes self-supporting over the long haul.

In terms of developing public policy, model programmes, and international standards, it is useful to view certification programmes as falling into three tiers, all of which can be based on process, performance, or a combination of both methodologies. Briefly, these three types of programmes are:

◆ *tourism certification programmes:* Most often used by the mass tourism industry, particularly large accommodations or hotel chains, these programmes focus on the physical plant or the internal business, not wider conservation and community impacts. They issue logos based on setting up environmental management systems that emphasize environmentally friendly and usually cost-saving procedures and renovations, compliance with existing legislation, and best practices that go beyond compliance. Often these certification programmes are created and run by industry trade associations without wider stakeholder involvement. While tourism certification programmes can lead to some "green" innovations, they are insufficient to generate sustainable tourism practices.

◆ *sustainable tourism certification programmes:* These are primarily or totally performance-based programmes, using independent auditors and multi-faceted questionnaires drawn up in consultation with a variety of stakeholders. Questionnaires include criteria on environmental, socio-cultural and economic impacts both within the business and on the surrounding community. Some examples are CST in Costa Rica, Horizons in Saskatchewan, and Blue Flag. This category appears to offer the best option in terms of developing global standards and a model programme. Criteria are broad enough to encompass various sizes of businesses and types of tourism, including niche markets such as nature, historic and cultural. At the same time, this category can include specific questions concerning conditions in a particular country, state or region and is administered locally. Because it focuses on performance both inside and outside businesses, it offers a more holistic approach to measuring the effects of a tourism business.

◆ *ecotourism certification:* This type covers companies that describe themselves (through brochures, websites, etc.) as involved in ecotourism. They are invariably located in or near protected areas or other fragile and pristine ecosystems and emphasize a business's impact on the local community and the ecosystem in which it operates. While "green" innovations for mainstream tourism reduce energy consumption and waste, ecotourism standards go beyond questions of eco-efficiency and are more responsive to national and local stakeholder concerns. While sustainable tourism certification strives to reduce the negative impacts, ecotourism certification gauges whether companies contribute *positively* to conservation of protected areas and what mechanism are in place to ensure *benefits* reach local people. NEAP in Australia is the best known ecotourism certification programme: two of its three levels distinguish and rate enterprises involved in ecotourism; the third category rates nature tourism enterprises, or those more properly defined as involved in sustainable tourism.

Terminology

Certification: a procedure by which a business, product or service is examined, measured and assessed against a set of standards. Those meeting the standards are given an award or logo.

Accreditation: a process of qualifying, endorsing or licensing entities that perform the certification audits, i.e., of certifying the certifiers.

Note: These definitions are not universally accepted. In a number of countries, including Australia, New Zealand and Canada, "accreditation" is used for what is defined in the US, Europe, Latin America and elsewhere as "certification". Hence Australia's certification programme: NEAP stands for Nature and Ecotourism Accreditation Programme.

Even though ecotourism constitutes a small sector of the market, measuring and rating it is clearly vital both because of effects on local communities and fragile ecosystems and because sound ecotourism can help ratchet up performance standards for the broader tourism industry. In terms of developing a global certification model, it seems most appropriate that ecotourism certification programmes should be incorporated as distinct components of sustainable tourism certification schemes that cover a wider market spectrum.

This is what last year's workshop at Mohonk attempted to do. Participants drew up and unanimously approved "The Mohonk Agreement: An Agreed Framework and Principles for the Certification of Ecotourism and Sustainable Tourism," a four-page document setting out the ingredients that should form the framework for credible sustainable tourism and ecotourism certification programmes.[3] In addition, workshop participants unanimously endorsed a proposal presented by the Rainforest Alliance to proceed with a feasibility study on the development of an international accreditation body that would set standards and certify the auditing firms. As the International Year of Ecotourism begins, it is hoped that this workshop has laid the foundation for future constructive work on certification and accreditation programmes.

Martha Honey is Director of the Peace and Security Programme and Ecotourism Programme at the Institute for Policy Studies (IPS) in Washington, D.C. She is the author of Ecotourism and Sustainable Development *(Island Press, 1999). The Mohonk Agreement and other reports and documents relating to certification are available on the IPS website (www.ips-dc.org).*

Notes

1. Also see the article by Meaghan Newson, "Encouraging and rewarding best practice: Australia's Nature and Ecotourism Accreditation Programme (NEAP)," beginning on page 25.
2. Ibid.
3. See the Ecotourism Project page on www.ips-dc.org.

Galápagos: ecotourismo versus conservación

David Parra-Bozzano, Consultant, Organization of American States, P.O. Box 17-12-031, Quito, Ecuador

Summary

The author, one of the first tourism experts to work on management plans for the Galapagos Islands, summarizes their structure and the evolution of tourism over the last 33 years. The archipelago is a global reference in terms of policy and operational systems set up for visitor management, as it receives a critical number of visitors annually. The role of the private sector in participative tourism management plans is discussed, as well as the complex situation arising from efforts to curb visitation and the alternatives envisaged for development of the local population.

Resume

L'auteur, qui est l'un des premiers experts en tourisme à travailler sur des plans de gestion pour les Galápagos, donne un aperçu de la structure et de l'évolution du tourisme dans les îles au cours des 33 dernières années. Recevant chaque année un nombre critique de visiteurs, l'archipel est une référence mondiale du point de vue des mesures et des systèmes opérationnels mis en œuvre pour gérer ces masses de visiteurs. L'article explique le rôle du secteur privé dans les plans participatifs de gestion du tourisme, la situation complexe créée par les tentatives de limitation du nombre de visiteurs et les solutions de rechange envisagées pour le développement local.

Resumen

El autor, uno de los primeros expertos en turismo en trabajar con programas de administracion para Galapagos, resume la estructura y la evolución del turismo en las islas en los ultimos 33 años. El archipielago sirve como referencia global en terminos de sistemas politicos y operativos desarrollados para la administración de visitantes, ya que recibe una cantidad critica de turistas anualmente. El articulo trata sobre el rol del sector privado en los programas de administracion del turismo participativo y sobre la situación compleja derivada de los esfuerzos realizados por limitar las visitas. Describe también las alternativas evaluadas para el desarrollo de la población local.

El medio

Galápagos es un archipiélago oceánico constituido por una isla mayor (Isabela) que cuenta con una superficie de 4588 km.2, cuatro islas medianas con áreas entre 1000 y 500 km.2 (Santa Cruz, Fernandina, Santiago y San Cristobal), seis islas menores cuya extension fluctua entre 500 y 20 km.2 y ocho cuerpos terrestres de hasta 1 km.2, un total de 19 islas y 42 islotes. (Rodriguez, J. 1993). Este territorio insular fue anexado como patrimonio de la Republica del Ecuador en 1832.

De este conjunto archipelágico, distante mil kilometros del continente, cinco son las islas pobladas: Isabela, Santa Cruz, San Cristobal, Santa María y Baltra, esta última es una base militar de 27 km.2 de superficie. A pesar de que la extension de estas islas pobladas corresponde al 80.3 % del total del área terrestre del archipiélago, la superficie de las áreas de asentamientos humanos de tipo urbano-portuarias y agrícolas, solamente alcanza los 263,5 km.2, es decir un equivalente al 3 % del área terrestre total de Galápagos, el 97 % restante es territorio de protegido bajo la categoría de Parque Nacional. Desde 1998 una franja de 40 millas alrededor del polígono base de las islas exteriores del archipiélago, también es creada como área protegida bajo la categoría de Reserva Marina, con una superficie total de 200.000 Ha.

Las Islas Galápagos han sido reconocidas en el ámbito mundial por su historia natural y, particularmente, por la singularidad de sus ecosistemas y especies que merecieron la atención y estudio por parte del naturalista inglés Charles Darwin, quien durante su periplo científico alrededor del mundo visitó el archipiélago el año de 1835. Entre las distinciones que se le han otorgado a Galápagos constan: Patrimonio Natural de la Humanidad (UNESCO,1979), Reserva de la Biosfera (MAB/UNESCO, 1985) y Santuario de Ballenas (1989).

Existe una permanente presión por ampliar la capacidad de operación turística, pero se mantiene el control del ingreso de visitantes dentro de los límites de la oferta establecidos por los Planes de Manejo. 68.000 pasajeros fueron registrados el año 2000 por la administración del Parque Nacional y la Reserva Marina de Galápagos.

La política de manejo turístico

El análisis del turismo en la región insular de Galápagos se circunscribe dentro de la problemática ambiental y humana de este entorno único, de características naturales especiales que desembocan en el tratamiento de dos aspectos sustanciales: el manejo sostenible de los recursos naturales y el bienestar social de la comunidad residente.

En 1924 el Gobierno Ecuatoriano emite un primer estatuto para la conservación de las singulares especies de fauna del archipiélago, posteriormente en 1936, se establece una legislación protectiva de los ecosistemas de algunas islas, hasta que en 1959 se crea el Parque Nacional Galápagos (PNG) como primera área natural protegida del país. El manejo de este territorio protegido se consolida en 1964 con la inauguración de la Estación Científica Charles Darwin y con el establecimiento del Servicio del Parque Nacional Galápagos (SPNG) en 1968, en la Isla Santa Cruz, centro geográfico del Archipiélago. Luego de un prolongado proceso de concertación con los usuarios, en 1986, estableció la Reserva de Recursos Marinos, que en 1998 se integra al Sistema Nacional de Áreas Protegidas, bajo la categoría de Reserva Marina.

Entre 1966 y 1967 se realizó el primer "Estudio de Factibilidad para la Operación Turística en el Archipiélago de Galápagos", partiendo de los postulados de conservación determinados para el área protegida. El primer Plan Maestro de Manejo del PNG se elaboró y entró en vigencia el año de 1974 y al año siguiente el Gobierno Nacional ejecutó el Plan de Conservación y Desarrollo Selectivo de la Provincia de Galápagos, integrando las áreas pobladas bajo criterios de control de las acciones antrópicas, en apoyo a la conservación de los ecosistemas.

Se ha establecido como principio fundamental para el desarrollo de la actividad turística en las islas, el uso sostenible de los recursos naturales mediante un modelo de turismo de naturaleza, claramente reglamentado y controlado en función de lineamientos científicos y técnicos, que garanticen la permanencia de los procesos ecológicos, con la participación de las comunidades locales. Este modelo de operación turística diseñado en 1967, coincide con la modalidad de "Ecoturismo Selectivo" definida treinta años después por la UICN y se sustenta en la singularidad del medio físico-biótico que, por su aislamiento y fragilidad, requiere ser protegido de intervenciones nocivas.

Indudablemente el sistema de visita itinerante a bordo de "Floteles" (hoteles flotantes), hacia los sitios terrestres y marinos seleccionados por su capacidad de carga, así como el control de las operaciones con base en los puertos, ha minimizado el impacto de las actividades turísticas sobre el ambiente insular. Este modelo de operación turís-

tica ha evitado la consolidación de inversiones de gran escala en facilidades e infraestructura, al interior de las áreas de asentamientos humanos.

La gestión ambiental y turística

En la gestión de Galápagos ha sido una constante la intervención política al nivel más alto de la Presidencia de la República y la conformación de Comisiones Presidenciales de Alto Nivel, para garantizar la toma de decisiones sobre su administración y manejo. En 1991 se instituyó la Comisión Permanente Galápagos (CPG), dependiente de la Presidencia de la República, como un amplio foro de discusión y negociación entre los actores involucrados en la problemática de la conservación y el desarrollo. Como fruto de la labor de esta Comisión se logró un conjunto de reformas a la Constitución Política de la República, para conferir un régimen jurídico de excepción a la Provincia de Galápagos.

Como resultado de las deliberaciones y de los consensos al interior de la CPG, se formalizó la creación de la Reserva Marina, se formuló el Plan Global de Manejo Turístico y de Conservación Ecológica (1991), el Plan de Manejo de la Reserva de Recursos Marinos (1992) y se elaboró la Ley de Régimen Especial para la Conservación y el Desarrollo Sustentable de la Provincia de Galápagos, que propone un nuevo estatuto jurídico-institucional para optimizar la gestión ambiental en el archipiélago. Ley que fue promulgada en marzo de 1998.

Desde el principio el manejo y la administración del turismo recayeron en el Servicio del Parque Nacional Galápagos (SPNG) cuya autoridad comienza a consolidarse en 1967 y se fortalece con la promulgación del primer Plan Maestro de 1974, en el que se determina las funciones para la protección y uso del área protegida. Con la expedición del Estatuto Administrativo del PNG en 1995, se crea la Dirección del PNG como dependencia del Ministerio del Ambiente, con el status de "entidad desconcentrada" que se rige por normas especiales y de autonomía del Sistema Nacional de Áreas Naturales Protegidas del Estado.

El ente nacional de turismo formaliza su presencia en Galápagos en 1982, cuando se establece la primera oficina de la Dirección Regional de Turismo en Puerto Ayora (Isla Santa Cruz) que en 1989, al crearse la Corporación Ecuatoriana de Turismo (CETUR), se convierte en delegación provincial con funciones de facilitación turística y control de la calidad de los servicios. En la actualidad el Ministerio de Turismo mantiene una Gerencia Regional con sede en al capital de la provincia insular.

Las autorizaciones y patentes de operación turística son reguladas por la Dirección del PNG basándose en el Plan de Manejo y al Estudio de Capacidad de Carga. El Ministerio de Turismo otorga permisos de funcionamiento a solamente a aquellas personas naturales o jurídicas que han cumplido con los requisitos constantes en los reglamentos de aplicación del Plan de Manejo. Se cuenta con los instrumentos técnicos suficientes, para llevar a cabo el seguimiento de las distintas modalidades operativas, configuración de los paquetes turísticos, circuitos y/o excursiones que se comercializan en el archipiélago.

Visitantes al Parque Nacional Galápagos

Año	Extranjeros	%	Nacionales	%	Total
1969	4.500	100.0			4.500*
1973	6.999	98.7	92	1.3	7.091*
1979	9.539	81.1	2.226	18.9	11.765
1980	13.465	77.2	3.980	22.8	17.445
1986	13.897	53.4	12.126	46.6	26.023
1987	13.010	42.2	17.769	57.7	30.779
1988	23.553	57.8	17.192	42.2	40.745
1994	40.468	75.2	13.357	24.8	53.825
1995	40.303	72.2	15.483	27.8	55.786
1996	45.782	74.0	16.113	26.0	61.895
1997	48.830	77.7	13.979	22.3	62.809
1998	50.351	77.7	14.440	22.3	64.791
1999	53.469	80.9	12.602	19.1	66.071

Fuente: Dirección del PNG, 2000.

(*) Junta Nacional de Planificación y Coordinación Económica, 1975.

El espacio para el turismo

La realidad geográfica, la posición oceánica, la confluencia de las corrientes marinas y la situación ecuatorial, son algunos de los elementos que han determinado un espacio atípico para acondicionar una operación turística tan peculiar. Es un vasto territorio marino-costero los atractivos turísticos se concentran en 54 sitios de visita terrestres y 62 sitios de visita marinos (Plan de Manejo PNG, 1996). Se trata de un espacio turístico discontinuo y focalizado, cuya zonificación prevé la mitigación de los impactos y propicia el disfrute del turista en contacto directo con el medio natural, para lo cual se ha diseñado circuitos que guardan relación con las características de las embarcaciones y su autonomía de navegación.

Existe una concentración de atractivos en la parte central del archipiélago, en la zona correspondiente a las islas Santa Cruz, Santiago y Santa Fe, las que con sus áreas de influencia acogen a un total de 48 atractivos (41.4%). Comparativamente las islas San Cristóbal y Española, en el sector sudeste, concentran 22 atractivos (19%). La zona de las islas Isabela Norte y Fernandina tienen un total de 14 atractivos (12.1%), mientras que el sur de la Isla Isabela acoge a 13 atractivos que representan el 11.2% y la Isla Floreana 11 atractivos (9.5%). Las islas del norte Genovesa, Marchena, Pinta, Wolf y Darwin, acumulan 8 atractivos (6.9%).

En cuanto a las facilidades turísticas el Ministerio de Turismo tiene registrados un total de 1.199 plazas de alojamiento en tierra, siendo Santa Cruz la isla con mayor equipamiento de servicios (63.22%). Las islas San Cristóbal y Floreana suman el 28.61% y la Isla Isabela, cuenta apenas con un 8.17% del total.

Los servicios de alimentación reúnen 1.965 plazas incluyendo las de los hoteles, restaurantes y cafeterías. No se incluye bares ni fuentes de soda y, para efectos de la estructuración del espacio turístico, tampoco se han incluido las plazas de comensales en los barcos. De la cantidad anotada 1.310 plazas (66.67%) se localizan en Santa Cruz, 500 en San Cristóbal (25.43%) y 155 (7.89%) en Isabela.

La planta de alojamiento flotante (floteles) suma 1.090 plazas, de las cuales el 66.79% corresponde a Santa Cruz y al 33.21% a San Cristóbal.

La infraestructura turística de apoyo a la operación se reduce a un muelle de aguas profundas en la isla Baltra y puertos naturales en las bahías de las islas Santa Cruz, San Cristóbal, Isabela y Floreana.

Galápagos recibe vuelos comerciales en los aeropuertos de Baltra, en funcionamiento desde 1968 y de San Cristóbal, inaugurado en 1987. La isla Isabela cuenta desde 1995, con una pista aérea exclusivamente para tráfico interno.

La operación turística

El tema concierta en primera instancia a examinar la llegada de visitantes al Parque Nacional Galápagos, cuyas estadísticas provienen del registro de las tarjetas de turismo que actualmente se cobra al ingreso, por un valor de US$ 100.oo. La Dirección del PNG mantiene series históricas del ingreso de visitantes, detalladas por orígenes desde 1973 y datos generales desde 1969.

Durante los primeros años de operación entre 1968 y 1972, el volumen de visitantes al Parque Nacional se mantuvo estabilizada y con ligeras fluctuaciones propias de un destino turístico emergente, además la oferta estaba cubierta por una sola empresa. La flota turística se amplía paulatinamente hasta que en 1973 se llego a contar con cuatro barcos con una capacidad total de 202 plazas y 13 pequeñas embarcaciones locales que transportaban a 74 pasajeros. Para contener el crecimiento turístico espontáneo el Plan Maestro del PNG de 1974 establece un límite de 12.000 visitantes al año "hasta que se pueda entender el impacto", sin embargo en 1979 se llegó al umbral de dicho límite. Por disposición del Presidente de la República se conformo la Comisión de Alto Nivel para el Estudio de Impacto Turístico, que definió una revisión de las condiciones de manejo de la visita y planteo regulaciones correctivas.

Después del sensible incremento de 1980, el siguiente repunte importante se registra en a partir de 1.986 cuando, como consecuencia de la apertura del nuevo aeropuerto de San Cristóbal, se produjo un crecimiento promedio anual en la llegada de turistas en el orden del 12%. Desde el año 1994 y como resultado del ajuste propuesto en el Plan de Manejo y de las medidas complementarias (moratoria y reducción de cupos), se ha mantenido un incremento moderado del ingreso de visitantes.

El volumen de turistas extranjeros siempre ha sido superior al de los nacionales, como consecuencia del alto costo y del carácter temático selectivo de la operación turística. Actualmente hay una tendencia dominante a explotar las excursiones en crucero, con duración entre 4 y 15 días con todos los servicios incluidos y los inversionistas turísticos ponen énfasis en la preparación y oferta de productos con mayor margen de beneficio,

coherente con una demanda de turismo receptivo creciente que contrasta con el turismo interno, menos significativo en volumen y nivel de consumo, relativamente estancado.

Dentro del sistema de operación turística establecido, el desarrollo de la modalidad de cruceros es coherente con la ubicación dispersa de los atractivos, vislumbrando el camino futuro de un eventual desarrollo de la actividad, sujeta a la incorporación de nuevos y lejanos sitios de visita.

Otro esquema aplicado es el que combina estancias en tierra en pequeños hoteles de las islas pobladas, con salidas en excursiones de "*Tour Diario*", hacia sitios de visita de las áreas consolidadas en torno a los puertos, para lo cual se cuenta con el soporte de barcos de capacidad limitada (10-12 pax) con menores niveles de comodidad.

Durante la última década se ha puesto en práctica otras modalidades como los "*Tours de Buceo*" y los "*Tours de Bahía*", operados generalmente por armadores y guías locales que orientan sus itinerarios de vistas cortas, hacia sitios de visita cercanos a los puertos.

La rentabilidad del "*Tour de Crucero*", lo ha convertido en la modalidad predominante con una capacidad instalada de 1.040 plazas (54,4 % de la capacidad total de los cruceros). En segundo lugar se sitúa el crucero estándar con 428 plazas (22,4 %) y, por último, el Crucero Económico con 268 plazas (14,0 % de la capacidad en cruceros).

Los barcos utilizados en excursiones marítimas de lujo oscilan entre 40 y 100 plazas de capacidad, con facilidades que garantizan un nivel de confort, seguridad, servicios y rapidez. Realizan navegación nocturna para alcanzar las islas más alejadas, en itinerarios que se cumplen entre 4 y 7 días y a costos que fluctúan entre 150 y 300 dólares diarios.

La modalidad de operación de "*Tour Diario*" ha sido diseñada principalmente para segmentos de demanda con menor capacidad de gasto, que combina el hotel de tierra y la excursión marina, las tarifas oscilan entre 40 y 80 dólares diarios. Esta modalidad exige un mayor control por parte de las autoridades a fin de elevar su nivel de servicio, la puntualidad, seguridad y minimizar el impacto ambiental. El "*Tour Diario*" ha demostrado estar presionado por una competencia desleal entre los empresarios. Cabe resalta que una de las empresas continentales de cruceros, tiene un producto de "*Tour Diario*" con un hotel y embarcación de lujo.

Todas las excursiones marinas y formas de visita tienen la exigencia de contar con guías calificados por la Dirección del PNG, sujetos al control de calidad y a las normas de seguridad, exigidas en su ámbito, por el Ministerio de Turismo y la Dirección General de Marina Mercante.

A manera de conclusión

Sin lugar a dudas, se puede afirmar que el Parque Nacional Galápagos es una de las áreas naturales protegidas que mayor tratamiento legal y técnico ha recibido para respaldar la gestión ambiental, en términos de un uso racionalizado y valoración de sus atractivos turísticos, en relación con otros parques naturales del mundo. A pesar de lo cual son recurrentes ciertos conflictos con los usuarios de los recursos naturales, principalmente de los sectores de la pesca y de la construcción de obras en las zonas pobladas, situación que ha sido considerada por la planificación regional, con el soporte de asistencia técnica permanente y con proyectos de investigación y monitoreo, como es el caso del Programa de Manejo Ambiental que se encuentra en ejecución con financiamiento del Banco interamericano de Desarrollo (BID) y el Programa de Naciones Unidas para el Desarrollo (PNUD).

Pese a las previsiones del sistema planificación instaurado, el fenómeno turístico en el archipiélago ha alcanzado niveles críticos, por las implicaciones e impactos acumulativos que ha generado tanto sobre el medio natural, como en la población insular. Más sensibles han sido los impactos indirectos del turismo, como las presiones de desarrollo de los asentamientos humanos y la consiguiente introducción de especies exógenas, que los efectos nocivos imputables a los turistas en los sitios de vista.

La dinámica económica del turismo ha sustituido progresivamente las actividades productivas tradicionales de la población local, por formas de ocupación relacionadas con las diversas opciones de prestación de servicios que ofrece la operación turística, produciendo una alta dependencia de esta sola actividad. Con la "congelación" de la oferta, derivada de las disposiciones legales de los últimos años, grupos de pobladores que no encuentran opciones en la actividad turística, han retomado prácticas como la explotación de las pesquerías, generando conflictos sociales por la competencia de los espacios para sus tareas extractivas.

Durante el lapso de treinta y tres años en el que se han desenvuelto las actividades turísticas organizadas en el archipiélago, siempre la acción de la empresa privada ha estado supeditada a los planteamientos de la gestión estatal, por lo que normalmente se ha ejercido controles preventivos que han evitado el actuar sobre hechos consumados. La práctica de sistemas de planificación participativa ha propiciado un espacio de amplio diálogo y concertación de las autoridades con los usuarios.

El mérito del manejo en Galápagos radica en haber implantado un modelo de "ecoturismo" de bajo impacto que, ademas de una normativa afinada mediante procesos "adaptativos" y de revisión permanente, tiene mecanismos internos de control como el altamente eficiente sistema de "guías naturalistas" y la estructura de administración del turismo de la Dirección del PNG, que realiza un seguimiento estricto para la aplicación de las regulaciones y prescripciones de los Planes de Manejo.

Es importante resaltar el alto grado de madurez del empresariado turístico tanto local como continental, que ha interiorizado la necesidad de mantener acciones continuas de capacitación profesional, educación ambiental y conservación del patrimonio natural. El máximo logro consiste en haber liderado el proceso de concertación ciudadana para conjuntamente consolidar un modelo de gestión local de características *sui generis* y que culminó con la promulgación de un marco legal de excepción en Ecuador, acorde con las particularidades de la región insular de Galápagos.

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Evolving ecotourism alliances conserve biodiversity in the Galapagos Islands

Ronald Sanabria, Sustainable Tourism Manager, Rainforest Alliance, Apdo. 138-2150, Moravia, Costa Rica (rsanabria@ra.org; www.rainforest-alliance.org)

Summary

Badly managed tourism contributes to pollution, disturbs wildlife, and brings undesirable influences to once isolated cultures. Ecotourism is an option conservationists can offer rural people who want to conserve their ecosystems and sustain a social and cultural structure with economic benefits. The strong potential of certification (the process of assessing compliance with pre-established environmental and social criteria) is illustrated by the SmartVoyager™ programme developed to support conservation efforts in the Galapagos Islands.

Résumé

Un tourisme mal gere aggrave la pollution, perturbe la faune et la flore et a des effets indesirables sur des societes autrefois isolees. L'ecotourisme est une option que les defenseurs de la nature peuvent proposer aux populations rurales soucieuses de preserver leurs ecosystemes et de renforcer leur structure sociale et culturelle par des avantages economiques. Le potentiel considerable offert par l'homologation (evaluation de la conformite à des criteres environnementaux et sociaux preetablis) est illustre par le programme SmartVoyager™, mis au point pour soutenir les efforts de sauvegarde dans les iles Galápagos.

Resumen

El turismo mal administrado contribuye a la polución, perturba la vida silvestre e influye de manera indeseable sobre culturas que alguna vez estuvieron aisladas. El ecotursimo es una opcion que los conservacionistas pueden ofrecerle a las poblaciones rurales que desean conservar sus ecosistemas y sustentar una estructura social y cultural con beneficios economicos. El fuerte potencial de certificacion (el proceso de evaluar el cumplimiento de acuerdo con criterios ambientales y sociales predeterminados) está ilustrado por el programa SmartVoyager™ desarrollado para apoyar los esfuerzos de conservación en las Islas Galápagos.

Travel has become the world's largest industry, generating 11% of global gross domestic product (GDP). Nature-related tourism is the fastest growing segment of the travel business. Less developed countries like Costa Rica have joined the ranks of developed countries largely due to nature-related tourism. Costa Rica, in which travel has become one of the top industries (surpassing coffee and bananas), is only one example. The tropics are dotted with tens of thousands of enterprises that depend on tourism.

Some state and national governments have surrendered to the economic lure of mass tourism, choosing visitor volume over quality of experience and abandoning other conservation and social goals in the process. Few governments have demonstrated sufficient resolve and consistency to guide tourism development. Many indigenous and rural community leaders often have good ideas and the best of intentions, but do not have the political power or the access to international markets to implement these ideas.

Tourism as an ally in conservation and social well-being

Conservation leaders, from the presidents of major NGOs and foundations to chiefs of Amazon tribes just entering the cash economy, recognize the potential of socially and environmentally sound tourism. Conservationists can point to dozens of world-class attractions that were saved by tourism, from national parks in Africa, to the Galapagos Islands, to the cloud forests and turtle beaches of Costa Rica, to Khao Yai National Park in Thailand.

The Galapagos Islands

Most conservationists, village leaders and government officials have also learned that tourism has its pitfalls, some hidden and some obvious. For example, it can be just as destructive as traditional extractive industries like logging and mining. The "industry without smokestacks" requires infrastructure – hotels, roads, parking lots, trails, restaurants and other services. Success and profit breed more development, which can quickly overwhelm a vulnerable natural area. Improperly managed tourism contributes to pollution and erosion, disturbs wildlife, tramples delicate plants, mars scenery and brings undesirable influences to once isolated cultures.

Ecotourism, defined as "responsible travel to natural areas that conserves the environment and improves the well-being of local people",[1] is one of very few industries that depends on protecting rather than exploiting natural resources. Responsible travel means complying with principles such as the following:[2]

- involves travel to natural sites;
- minimizes impact;
- builds environmental awareness;
- provides direct financial benefits for conservation;
- provides financial benefits and empowerment for local communities;
- respects local cultures;
- is sensitive to the host country's political environment and social climate;
- supports human rights and international labour agreements.

As defined above, ecotourism represents one of the options that conservationists and advocates of social well-being can offer to rural people who want to conserve forests, coastlines, coral reefs, wetlands or other types of ecosystems and sustain a social and cultural structure with economic benefits. But how do we promote this type of tourism, and how do we ensure that so-called "ecotourism" ventures live up to the name?

Certification as a tool for change

Traditionally, several tools have been designed and implemented by ecotourism experts, governments and NGOs to promote and sustain ecotourism operations: technical assistance, policy statements on ecotourism, research departments or projects, public education for travellers and local communities, informational material for travellers and tourist guides, ecotourism projects/facilities in developing countries, and travel programmes.

This article focuses on another important tool that has been used to address the impacts of nature-based tourism: certification. Certification is the process of assessing compliance with pre-established criteria. Credible and transparent certification programmes provide a tool for differentiating tourism operations from others that are less environmentally and socially sound. Through voluntary independent certification, the tourism industry can engage in evolving alliances with NGOs to conserve biodiversity and foster social well-being.

Tourism operations involved in certification programmes have access to a tool that provides market differentiation and recognition. These alliances, in turn, can support local and national government plans, as well as regional sustainable development plans. The SmartVoyager certification programme, created to support conservation efforts in the Galapagos Islands, illustrates certification's potential.

Sea lion

SmartVoyager™: promoting change in alliance with the tourism industry

The Galapagos Islands are many different things to different people: a world-renowned national park, a UNESCO World Heritage Site, a marine resources reserve, the birthplace of Charles Darwin's evolutionary theory, the home of species found nowhere else on Earth and a unique tourist destination. This visually stunning yet delicate ecosystem, located approximately 600 miles west of Ecuador, faces its share of threats – from fishermen, colonists, invader species from the mainland, and (some say) tourists.

Tourism is growing rapidly. About 60,000 people visited the islands last year, compared to 46,000 in 1994.[3] Tourists travel from island to island on specially equipped tour boats which also serve as floating hotels.

In May 2000 the Rainforest Alliance, an international non-profit organization dedicated to the conservation of tropical ecosystems, and Conservacion y Desarrollo (C&D), an Ecuadorian conservation group, introduced a voluntary certification programme called SmartVoyager designed to harness the power of well-managed tourism as a conservation tool. SmartVoyager's immediate objective is to help the tourism industry minimize its impacts, give a "green seal of approval" to tour boats that tread lightly on the Galapagos, and give concerned visitors an opportunity to choose responsible and certified tour boats.

The broader goal of the programme is to provide a forum and incentives for improved interaction between conservation agencies and the tourism industry, so that visitors and the companies that profit from them are increasingly integrated, active and vocal allies in a coordinated campaign to enjoy and conserve the Galapagos Islands.

SmartVoyager's goals were based on Agenda 21 for the Travel and Tourism Industry. After three years of work performed by C&D with scientists, conservation experts, tour operators, and others, SmartVoyager standards were developed. The programme is also guided by an International Advisory Committee comprising a multidisciplinary group of experts. Box 1 summarizes the steps that were taken to create certification standards for environmentally and socially responsible tour boats. Through these research and consultation steps, the definition and principles of ecotourism were translated into concrete certification principles (Box 2) adapted to the reality of the Galapagos Islands. These SmartVoyager certification principles are subject to continual research and improvements.

The standards currently cover potential sources of pollution, such as wastewater and fuels, and set rules for the management of everything from docks to the small crafts that ferry visitors ashore. Procurement and supply management guidelines are designed to minimize the chances of introducing alien wildlife species to the area. The standards require good living conditions and advanced training for the boat crew and guides. Passengers must be given the maximum opportunity to appreciate the beauty of the islands and close encounters with wildlife, while leaving no trace of their visit.

The SmartVoyager programme has been subsidized by C&D and the Rainforest Alliance. In the upcoming phases, it will require additional support from governments and foundations, as well as from certification fees paid by certified operations.

How SmartVoyager works

To ensure transparency, the following mechanisms have been established:

- Certification standards are public documents available to any interested party, and suggestions for improvements are welcomed (recommendations are collected throughout the year, formal revisions are conducted every six months);
- Certification audits are performed by properly trained independent third-party auditors with no conflict of interest;
- The certification is awarded by an independent international certification committee;
- Public presentations and consultation meetings are conducted whenever possible.

The following is an overview of the general steps that constitute SmartVoyager's certification process:

1. *Application:* Applicants should submit an application form to C&D or to the Rainforest Alliance. Once this has been done, the applicant will receive the necessary documentation to continue with the certification process.
2. *Self-assessment:* After the application has been submitted, the tour operator usually performs a self-assessment or internal review to determine its level of compliance with the standards.
3. *Evaluation:* In some cases, and as a complement to the self-assessment, the operator may request a short evaluation to decide whether or not an on-site assessment needs to be performed. If so, C&D

Box 1
Developing SmartVoyager Guidelines

- Field identification of the different environmental impacts caused by tourism operations and identification of the main causes of environmental degradation in the Galapagos Islands.
- Identification of mechanisms that tourism operators could implement to conserve and protect the islands.
- Understanding of the procedures involved in a tourist operation.
- Investigation of the processes used to control the entrance of products from the continent, sanitary systems and environmental control.
- Evaluation of the mechanisms for environmental control and safety on the boats.
- Dialogue with tourism operators on the environmental problems that exist in the Galapagos.
- Analyses of existing international norms and agreements with which compliance is demanded in order to obtain navigation permissions.
- Analysis of warehouses and supplying centers.
- Analysis of the fuel systems.
- Analysis of the boats' maintenance systems (paintings, machinery).
- Analysis of the fumigation systems.
- Analysis of the consumption of fresh water, energy and fuel.
- Analysis of the consumption patterns of tourists.
- Evaluation of the behaviour of tourists and operators on the islands.
- Identification and analysis of the level of environmental conscience of the personnel and crew.
- Conversations with different tour guides in the Galapagos on environmental problems and handling of tourist groups.
- Compilation and improvement of four draft sets of standards through internal revisions and partner NGOs.
- Validation and evaluation in the field (pilot project with one operator).
- Introduction of adjustments to the standards and creation of the fifth draft. Discussion with tourist operators to analyze the programme and evaluate its acceptance on the part of key operators.
- Delivery of standards to the Galapagos National Park for their revision.
- Circulation of the standards among key players and members of the International Advisory Committee and incorporation of their recommendations.
- These standards are subject to continual improvement with formal revisions every six months.

assigns an assessor to perform this evaluation (pre-assessment). The client must cover the costs of the evaluation.

4. *Audits*: These on site assessments, which involve visits to vessels and inland facilities to assess compliance with SmartVoyager standards, are required for all operations. The scope and intensity of the assessment depends on the size and type of operation. The cost of the audit (mainly the auditor's fee and travel expenses) is covered by the client.

5. *Status granting*: After the necessary assessments have taken place and all documentation is presented to C&D and the Rainforest Alliance, an international certification committee awards a status rating to the operation:

a) Approved: When the operation complies with at least 80% of total SmartVoyager standards, there are no fatal flaws and there is a commitment to ensure continual improvement every year. Only when the operation is approved can a boat be certified.

b) Denied: When the operation does not comply with SmartVoyager standards and it is not expected that improvements will occur in the short run.

6. *Certification contract*: Approved operations must enter into a certification contract with C&D and the Rainforest Alliance for use of the SmartVoyager certification mark.

7. *Annual renewal*: Companies are required to submit annual reports on their certified operations. Annual Programme Fees must be paid for certified boats according to SmartVoyager's fee structure.

8. *Annual audits*: All certified boats must be audited yearly to re-verify compliance with SmartVoyager standards and to revalidate their certificate. The scope and intensity of the audits depend on the size and type of operation. The client covers audit expenses.

9. *Unannounced visits*: Besides yearly audits, SmartVoyager's staff and/or external observers may randomly visit certified companies.

10. *Emergency assessments*: If serious violations of SmartVoyager standards occur or are suspected, C&D may perform emergency assessments of certified boats.

Achievements

SmartVoyager has benefited from priceless support given by numerous individuals and organizations, devoted staff and friends of the programme, and the members of the International Advisory Committee, who have given advice to ensure the success of the programme. Visionary outbound tour operators such as the International Galapagos Tour Operators Association (IGTOA) have also endorsed the programme's mission and objectives. Government officials have expressed support for the programme and have seen the potential for incorporating it into the country's tourism plans.

Yet the biggest achievement comes from the changes that have already occurred on the ground and on the boats. These changes are having a positive impact on conservation and social well-being in the Galapagos. Currently two companies have their boats enrolled in the programme, representing five of the 20 larger sized vessels that operate in Galapagos. It is expected that other conscientious companies will follow in the near future. Some specific practices implemented on certified boats include the following:

- Soaps, detergents and shampoo used on board are biodegradable.
- Sewage and grey waters are treated under aerobic decomposition. The residual water is filtered and purified with ozone before it is discharged in open waters.
- Water is produced on board using desalinization units. It is purified with ozone to eliminate chlorine discharge in the ocean. Passengers are asked to refill the plastic water bottles provided in each cabin.
- To conserve energy, only towels placed on the floor of the cabin are replaced.
- A waste disposal management system has been implemented on every vessel, including garbage bins on each deck to separate organic, paper, glass and plastic waste. Signs are posted in all cabins to remind guests to conserve, reuse and recycle.
- All outboard motors on dinghies or pangas have been changed from two-stroke to four-stroke engines. Four-stroke engines are 70% quieter than two-stroke ones. They emit virtually no fumes and consume 50% less fuel.
- The paint used on the hull is TBT-free and the paint on the superstructure is lead-free. Exterior walkways on the boats are free of varnish and have been replaced with natural teak wood.
- Exterior lights have been replaced with yellow lights that do not attract insects. The cooling elements used in the refrigeration and air conditioning systems on board are gas-free to prevent gases escaping and adding to the greenhouse effect, and R-12 has been changed to R-134A.
- Collaboration efforts have been arranged with the Galapagos National Park to patrol the marine reserves, in order to prevent fishing, commercialization, and consumption of flora and fauna species that are prohibited by law.
- Employment priority is given to local villagers.
- Crew members' living quarters have been significantly improved. Hygienic and sanitary conditions have been provided to improve the quality of life on board.
- All employees receive life and health insurance, including prescription medicine for themselves and up to five family members at no cost to the employee.
- Qualification programmes have been implemented on all levels. All cleaning personnel have been given courses with an emphasis on environmental themes directly related to their work.

Box 2
SmartVoyager Certification Principles

The standards are organized into principles that support the priority areas for sustainable tourism according to Agenda 21 for the Travel and Tourism Industry, adapted to the Galapagos circumstances:

- **Company Policy**: The company must have a management policy that includes compliance with national legislation and international agreements as well as SmartVoyager standards.
- **Conservation of Natural Ecosystems**: The tourist operation must support and promote conservation of the Galapagos National Park and the Marine Reserve.
- **Reduction of Negative Environmental Impacts**: The tourist operation must prevent or mitigate and compensate for any environmental damage done to the Galapagos Islands and the Marine Reserve.
- **Lowering the Risk of Introduction and Dispersal of Exotic Species**: The tourist operation must prevent the introduction of species from the continent to the islands and the dispersal of species between islands.
- **Just and Proper Treatment of Workers**: The tourist operation must elevate the socio-economic welfare and quality of life of the workers and their families.
- **Employee Training**: All personnel involved with the tourist operation must receive environmental education and training.
- **Community Relations and Local Welfare**: The company must make a commitment to the welfare and socio-economic development of the Galapagos Islands community.
- **Strict Control of Use, Supply, and Storage of Materials**: Boat operators must plan and control the consumption, supply, and storage of materials, taking into consideration the well-being of tourists, workers, local communities, and conservation of natural ecosystems.
- **Integrated Waste Management**: Boats must follow a waste-management plan, including reduction, reuse, recycling, and adequate final treatment and disposal of all wastes.
- **Commitment on the Part of the Tourists**: Tourists must be guided in their involvement in protecting natural resources and local cultures, tread lightly, and collaborate with the island conservation programmes.
- **Planning and Monitoring**: Tourism operations must be planned, monitored and evaluated, taking into consideration technical, economic, social and environmental factors.

Lessons learned and future plans: moving towards collaborative sustainability

Throughout its development, SmartVoyager has learned that to have a successful and sound ecotourism certification scheme, some general principles and elements must be implemented. These lessons are best summarized by the framework unanimously adopted at the conclusion of the international workshop convened by the Institute for Policy Studies at Mohonk, New York in November 2000, with participation from 20 countries and representatives from most of the leading global, regional, national and sub-national sustainable tourism and ecotourism certification programmes.[1]

The programme has taken the necessary steps to turn these lessons into strengths. Following are some factors that have been essential in the devel-

Box 3
Feasibility Study, Organizational Blueprint and Implementation Plan for a Global Sustainable Tourism Stewardship Council (STSC): An Accreditation Body for Sustainable Tourism Certifiers

Project Summary

The Rainforest Alliance has received seed funds to function as coordinator of this study, whose primary objective is to investigate the possibility of establishing an international accreditation body for sustainable tourism certification, and provide a fully developed implementation plan. The main responsibilities of this accreditation body would be to establish international criteria for accreditation, monitor compliance with such criteria, promote consumer awareness, and increase the credibility of certification schemes. In addition, an accreditation body for sustainable tourism could indirectly raise the environmental and social standards for all sectors of the tourism industry.

The motivation to initiate this study comes from lack of transparency and participation in the definitions of standards, lack of clarity of the evaluation and monitoring systems used, absence of harmonization and reciprocity among certifiers, and manipulation of the terms "sustainable" and "ecotourism", all of which diminishes the potential benefits of certification and leads to consumer confusion. The international community needs a tool to address the fragmentation among current certification schemes that exist, and to help sustainable tourism suppliers and consumers effectively contribute to biodiversity conservation and social welfare. While it is argued that credible, local certifiers have the advantage of their knowledge of the environmental, social, political and economic realities of the country where the tourism operation takes place, they often do not have the possibility to promote their certification schemes because of limited access to resources and information, as well as a lack of networking and marketing capacity.

An international accreditation entity would help establish generic criteria for ecotourism and sustainable tourism certifiers, accredit certifiers, guide the definition of local standards for each country/region, guarantee stakeholder participation, promote the accreditation system and standards internationally, and perform random audits of certifiers and certified companies. Having credible, accredited certifiers could be beneficial not only for governments and NGOs trying to promote sustainable tourism through certification, but also for tourism operators looking to promote sales of environmentally and socially sound destinations as well as for conscientious tourists. Certifiers themselves could benefit from having an independent body that assures that their systems are designed and implemented in a credible, transparent way.

A strong participatory approach is needed for this project, given the multiplicity of stakeholders and the need for establishing a credible accreditation system with the potential to have a significant, positive impact worldwide. A core working group of representatives from international organizations has been established as the Executive Advisory Committee for the project. The project has been divided into six components with the following specific objectives:

1) Understanding current certification and accreditation schemes. To determine the need to have an accreditation body for sustainable tourism certification.

2) Project management. Communication mechanisms must be established to assure an efficient flow of information internally and externally. The Rainforest Alliance will have the role of the project's steering agent and communications facilitator.

3) Consolidating the Executive Advisory Committee. The Rainforest Alliance as coordinator is in charge of establishing the Executive Advisory Committee to guide the execution of this project. The objective is to build support and gain expertise from established key institutions, which will eventually determine the successful implementation of a sustainable tourism accreditation agency.

4) Determining the feasibility, organizational structure and implementation plan for a sustainable tourism accreditation body. This is the core component of the project, which seeks to determine what the different stakeholders need from an accreditation system. This component will also assess the demand for accreditation services and the credibility of current certification schemes, the financial mode developed out of the needs assessment, the feasibility of defining minimum international standards, the financial feasibility for establishing and maintaining an accreditation organization, its marketing potential, the most adequate organizational structure for it, and the steps that need to be taken for its implementation.

5) Regional workshops. The goal is to build consensus among all stakeholders, including NGOs, certifiers, government representatives, and members of the tourism industry, in regard to the creation of a sustainable tourism accreditation body. A total of six workshops are proposed, for different key regions of the world.

6) Implementation. The consultants will be responsible for presenting a complete implementation plan to the Committee, whose members will agree upon the final recommendations to be made to their various parent organizations. It will be the responsibility of the Executive Advisory Committee to pursue additional funds for the implementation of the plan.

The aim of the organizations involved in this project is to provide the international community with its results during 2002, the UN International Year of Ecotourism.

opment and future maintenance of the programme:

- proactively looking for international and government support;
- increasing communication efforts with different stakeholders (government, industry, other NGOs, local people);
- promptly clarifying misunderstandings and misperceptions;
- holding open discussions with all interested parties;
- networking with governmental and other non-governmental efforts;
- strengthening a participatory approach through public consultation;
- educating people about the benefits of certification.

Equally important to mention are some difficulties the programme has faced:

- lack of an international accreditation body for tourism certifiers, to help guide the establishment of the programme and attest to its credibility. This is the primary challenge. In that regard, the Rainforest Alliance is participating in a feasibility study for establishing such an organization;
- lack of understanding of what independent third-party certification means, and how it could support industry, governmental, conservation and social well-being efforts;
- unfavourable local political circumstances;
- insufficient funds to develop the programme in its initial stages.

It is expected that the next two years will be critical to further programme development. Currently SmartVoyager is primarily useful for boat operations with a capacity of 16 passengers or more. In the future it will be adapted to the reality of smaller boats in order to be more equitable. Next steps also include strengthening the International Advisory Committee and working more closely with local leaders, governmental agencies, and conservation organizations in the islands. Marketing efforts and the strengthening of collaborative alliances will increase in the upcoming years. In summary, SmartVoyager will be actively looking more towards evolving strategic alliances to become a model for collaborative sustainability in tourism development.

Notes

1. Definition provided by The International Ecotourism Society, 1991.
2. Honey, M. (1999) *Ecotourism and Sustainable Development: Who Owns Paradise?* Island Press, Washington, D.C.
3. International Galapagos Tour Operations Association.
4. A summary is available on the Institute for Policy Studies web site (*www.ips-dc.org*) under the Ecotourism and Sustainable Development section. For more information about Agenda 21 for the Travel and Tourism Industry Towards Sustainable Development, see *www.eco-tour.org*. ◆

Reducing the environmental impacts of cruise ships in the Arctic and Antarctic

Baerbel Kraemer, Ship Operations Manager and Environmental Affairs, Hapag-Lloyd Kreuzfahrten GmbH
Ballindamm 25, 20095 Hamburg, Germany (baerbel.kraemer@hlkf.de)

Cruise ships increasingly travel to remote areas including the Arctic and Antarctic, two of the last pristine nature reserves on Earth. Both regions have extremely sensitive ecosystems. While this is one reason they attract visitors, it sometimes appears doubtful whether tourists should really be there at all. Tour operators offering Arctic and Antarctic cruises have a clear responsibility to protect the environment.

The scenery, wildlife and cultures in these vast tracts of wilderness – in a world without roads or other traces of development – are rapidly changing. Their beauty would be spoiled by roads, pipelines and oil rigs, but also by litter, pesticides and toxic chemicals. Dioxins and other chemicals are already present in the air, water and wildlife. Indigenous and other inhabitants have expressed concern about the threats of persistent pollution and environmental degradation relating to tourism.

The UNEP/UNESCO/World Tourism Organization "Tour Operators Initiative for Sustainable Tourism Development" (TOI) is a group of like-minded tour operators. As a member of this group, Hapag-Lloyd Kreuzfahrten is committed to promoting development of sustainable forms of tourism. TOI members recognize the importance of conserving and protecting ecologically sensitive landscapes. Operating practices are based on the concept of ecotourism: that is, responsible travel to natural areas for the purpose of enjoying and appreciating nature, keeping visitor impact as low as possible.

For Hapag-Lloyd Kreuzfahrten (HLK), one important element of environmental protection is choosing appropriate technology for its cruise ships. Those ships visiting polar regions belong to the highest "ice class" (i.e. they have especially thick hulls) and are equipped with the most modern technology. This is one way environmental impacts can be reduced to a minimum. Ships also have biological sewage plants. Wastewater is recycled and solid waste is burned in incineration plants aboard or discharged at ports with suitable facilities. Thus there is much less pollution of the ocean, and less influence on ocean ecosystems.

Another way to protect the environment is to use diesel instead of heavy fuel oil. Diesel is used by both the HLK expedition ships that visit polar regions, the MV *Bremen* and the MV *Hanseatic*.

By 2003, the International Maritime Organization (IMO) plans to ban application of anti-fouling paints used on ships' hulls if they contain organotin compounds. These chemicals' presence should be completely banned by 2008. Organotin compounds like TBT (tributyl tin) are among the most toxic chemicals ever produced. TBT-free paint is already used on all HLK's cruise ships.

TOI members are convinced that tourism can contribute significantly to the viability of local economies. Respect for nature and sensitivity to ethnic groups, and to the well-being of all inhabitants, have top priority. One key to sustainable tourism development is creating consciousness, comprehension and respect among passengers. To achieve this goal, senior officers need to be highly experienced in polar regions.

Guidelines concerning Arctic and Antarctic visits are distributed during a briefing to passengers and crew members before cruise ships enter polar waters. To minimize environmental impacts and improve visitor experience, HLK has also developed a handbook for travellers containing information on history, geology, climate and vegetation, including details on fish, insects, krill, underwater creatures, seals and whales, and how to protect fauna and flora.

The following is based on extracts from the handbook:

We regard appropriate behaviour and attitude as a part of your equipment. Please overcome your sense of individuality and remain attached to your group at all times.... Never come closer than five metres to even harmless animals.... We should not leave litter behind – all we should take home are memories and photographs. We never visit stations without a prior invitation....

Tour assistants who have received training on destinations' environmental, cultural, social and legal issues are conscious of their role as models for tourists. They are supported by qualified lecturers, biologists, geologists, glaceologists, marine biologists and historians. Assistants accompany passengers ashore to answer questions and ensure that guidelines are respected. HLK also gives scientists working in polar areas the opportunity to travel on its cruise ships.

Tourism should not be allowed to alter the lifestyles of individuals or communities. The rights and wishes of inhabitants are to be respected. Permission must be obtained to visit churches, graveyards and other holy places, and camps and fishing sites. To help conserve cultural assets, HLK has agreed to contribute money to the Antarctic Heritage Trust for restoration of historic huts. In the Arctic specific agreements with inhabitants make it possible for visitors to take part in the presentation of historic and folk dances as well as arts and crafts displays. In small villages, ships doctors sometimes provide medical assistance and supply medicines.

A good reason to allow ecotourism in these pristine parts of the world is that customers are becoming more and more sensitive to the total quality of the holidays they have paid for. There is growing demand for more environmentally friendly tourist destinations. Having experienced the beauty and uniqueness of these areas, passengers often become advocates of their protection.

Tour operators like Hapag-Lloyd Kreuzfahrten have an important role to play in catalyzing positive changes to protect the natural environment, conserve plants and animals, and promote the welfare of host communities while protecting their commercial interests and meeting customer expectations. These are the most important aims of sustainable tourism in the long term.

Web sites:

Tour Operators Initiative for Sustainable Tourism Development: www.*toinitiative.com*.
World Maritime Organization (including information on organotins used in anti-fouling systems): www.*imo.org*.
Antarctic Heritage Trust: www.*heritage-antarctica.org*.

Integrating biodiversity conservation planning into the tourism sector

Héctor Ceballos-Lascuráin, Director General, Programme of International Consultancy on Ecotourism (PICE), and International Coordinator for the UNEP/UNDP/GEF/BPSP Biodiversity/Tourism Study. Camino Real al Ajusco 551, Col. Xolalpa (Tepepan), Tlalpan, 14649 Mexico DF, Mexico (ceballos@laneta.apc.org)

Summary

The UNEP/UNDP/GEF Biodiversity Planning Support Programme (BPSP) assists national biodiversity conservation planners in developing and implementing national biodiversity strategies and action plans. BPSP is studying the integration of biodiversity concerns in the tourism sector, with a focus on incorporating "global best practice" into these strategies and action plans. In this article ecotourism in Costa Rica, South Africa, Belize and other countries is highlighted.

Résumé

Le Programme d'aide à la planification de la diversité biologique (BPSP), initiative conjointe du PNUE, du PNUD et du FEM, aide les planificateurs nationaux de la préservation de la diversité biologique à élaborer et à mettre en œuvre des stratégies et des plans d'action nationaux pour protéger cette diversité. Le BPSP étudie la prise en compte des préoccupations relatives à la diversité biologique par le secteur du tourisme, privilégiant l'incorporation de "bonnes pratiques mondiales" dans les stratégies et plans d'action. L'article présente des initiatives d'écotourisme au Costa Rica, en Afrique du Sud, au Belize et dans d'autres pays.

Resumen

El Programa de Apoyo a la Planificacion de la Biodiversidad de UNEP/UNDP/GEF colabora con los planificadores de conservacion de la biodiversidad en el desarrollo y la implementacion de estrategias y planes de accion nacionales de biodiversidad. PAPB (BPSP) se encuentra abocada a lograr integrar la preocupación por la biodiversidad al sector de turismo, concentrandose en incorporar "los mejores usos y costumbres a nivel global" a estas estrategias y planes de accion. En este articulo se destaca el ecoturismo en Costa Rica, Sud Africa, Belice y otros paises.

As we all know, tourism has become one of the most important economic activities in the world. According to the World Tourism Organization (WTO), in 2000 world tourism grew by an estimated 7.4%. A record 698 million international trips were made in 2000 (WTO, 2001). The number of domestic tourists is estimated to be probably as much as ten times the number of international tourists.

Clearly tourism has a paramount economic role for countries around the world and, if planned and managed correctly, can significantly contribute to sustainable socio-economic development and environmental conservation. The appropriate interaction between biodiversity conservation planning and tourism planning and development has become a key concern for many institutions at the local, national and international levels.

The Biodiversity Planning Support Programme (BPSP) of UNEP/UNDP/GEF has a mandate to provide assistance to national biodiversity conservation planners as they develop and implement their national biodiversity strategies and action plans (Duthie, 2000). Sustainable tourism has been highlighted recently as an area of major concern within the Convention on Biological Diversity (CBD). It was the focus of attention at the recent Conference of Parties in Nairobi (UNEP/CBD/COP/5/20). In the CoP's final decisions, Parties were requested to submit case studies of best practice in sustainable tourism.

For the above reasons, BPSP is presently carrying out a study on integration of biodiversity into the tourism sector – with a specific focus on how best to incorporate "global best practice" into national biodiversity strategy and action plans. Within the scope of this study, a compilation of national case studies from 12 countries has been obtained. The countries are: Belize, Botswana, Canada, Chile, Costa Rica, Kazakhstan, Korea, Mexico, Peru, Seychelles, South Africa and Trinidad and Tobago.

Also within the framework of this study, an International Workshop was held in Mexico City in March 2001. One of the main outputs that will result is a document presenting global best practice guidelines for integrating biodiversity conservation planning into the tourism sector.

The 12 selected country case studies, apart from containing much valuable information on the interaction of biodiversity conservation planning and tourism planning in general, represent an interesting, updated cross section of ecotourism development around the world showing very different stages of progress and achievements, including the state of the art in countries well known for their ecotourism track record such as Costa Rica, South Africa and Belize. The following brief description of some of these developments is based mainly on the country case studies received (still in draft form) and the Workshop discussions.

Costa Rica

Tourism has long been considered by the Costa Rican governments as a key generator of employment, distributor of benefits, promoter of foreign investment, and supporter of growth which is compatible with the environment and rural development.[1] The main success factors of this activity have been the quality and variety of attractive nature the country possesses, its excellent protected areas system, its well functioning democracy, and its traditional hospitality to foreigners.

Ecotourism in Costa Rica has experienced an interesting evolution over the last 20 years or so. Over the past five or six years the government authorities, with the strong collaboration of the tourism industry and a number of NGOs, have been endeavouring to consolidate the tourism process, fostering tourism activity with a strong nature component but with a multi-phased and varied character, diversifying the line of tourism products and services offered. The government now faces the challenge of integrating ecotourism into a diverse mosaic of tourist activities and attractions with the aim of offering a single extensive tourist product: "a peaceful, green, and clean country".

This is not an easy task, as there seems to be a dual policy of heavily marketing Costa Rica's natural areas and ecotourism attractions, and at the same time trying to augment visitor numbers by means of huge beach resorts and urban hotels owned by transnational chains, cruise ships and prepaid air charter tours (Honey, 1999).

From 1995 to 1998, tourism (with a strong ecotourism component) was the country's top dollar earner. Although still growing, in 1999 and 2000 it moved to second place due to the surge of high-technology industry, especially electronics.

Tourism represents 72% of national monetary reserves, generates 140,000 jobs and produces 8.4% of the GNP. Over 500,000 Costa Ricans (16% of the total population) depend directly or indirectly on the tourism sector. In 1999, for the first time in history, the country welcomed over a million tourists (1,027,000). This figure is expected to double by 2010. Income from tourism was US$ 829.4 million in 1998.

Regarding protected areas, 25.1% of Costa Rica's territory is classified under some category of conservation management. In 1999, protected areas welcomed a total of 866,083 national and foreign visitors, which generated about US$ 2.5 million in admission fees and payment of services. The number of domestic visitors now exceeds the number of international tourists visiting protected wilderness areas.

An important achievement of the Costa Rican

government has been the division of the country into eleven "conservation areas", by means of which the National System of Conservation Areas (SINAC's) administration covers all the national territory in protected areas as well as in the rest of the territory, where biodiversity conservation is promoted and regulated. Apart from State-administered protected areas, Costa Rica has an important and very successful network of private reserves, established as non-profit entities. Most of the associated reserves are involved in ecotourism activities.

Despite the many bright points of ecotourism development in Costa Rica, there are still many shortcomings with respect to the harmonious interaction between tourism and conservation. These can be summarized in terms of three closely interrelated issues: inefficient coordination between responsible parties, serious negative environmental impacts of non-planned tourism, and a generalized lack of environmental awareness in society of the importance of sustainable tourism.

The main challenge for Costa Rica is maintaining a high level of quality in its important ecotourism industry, while finding ways to provide more tangible benefits from this process for the national park system and preserving the country's unique biodiversity heritage.

South Africa

Tourism, which is the fourth largest generator of foreign exchange in South Africa, also ranks third in its contribution to the economy.[2] Although South Africa attracted just 0.9% of total world tourism arrivals internationally in 1998, tourism was the economic sector with the most significant growth in the country, having generated an income of US$ 8.9 billion. There were 5.9 million foreign visitors in 1999 (a 37% increase over 1994).

The dominant forms of nature-based and adventure tourism include safari tourism, whale watching, white water rafting, hiking, bird watching, 4x4 trails, bush survival, deep-sea fishing, hunting and diving. There are also excellent opportunities for cultural tourism activities. The most popular activity undertaken within the foreign visitor market is visiting game and nature reserves (61% of visitors), followed by visits to historic sites (37%).

South Africa is one of the 17 "megadiversity" countries. It is one of the Earth's biologically wealthiest countries and probably has the highest level of plant endemism in the world. The White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity is currently being adapted to form a Biodiversity Chapter within the National Environmental Management Act.

Since the first democratic elections in 1994, there has been much emphasis on stakeholder consultation and participation in all sectors of government policy and planning. The 1996 White Paper on the Development and Promotion of Tourism states that government is committed to facilitating responsible tourism through a series of participative processes. Each of South Africa's nine provinces has a Provincial Tourism Organization (PTO).

South Africa has 422 formally protected areas covering approximately 6% of the land surface area. There are also 160 privately owned reserves, apart from several thousand privately owned game farms that attract large numbers of ecotourists. Many privately owned game reserves (which are now basically ecotourism destinations) adjoin public protected areas, by which the area effectively protected is vastly increased.

There are a number of policy links between tourism development and biodiversity conservation and planning in South Africa. However, there is a perceived institutional gap in that there is no overall structure overseeing and coordinating biodiversity conservation and tourism planning in the nine provinces. Each of the provincial conservation authorities acts independently. These authorities do not answer to a central regulating body. In addition, successful conservation and tourism strategies are not efficiently transferred between agencies.

Ecotourism has been playing a dual role in the new post-apartheid South Africa, serving to reintegrate the nation into the world economy and to help redress grievances and redistribute wealth to the country's poor. Ecotourism is recognized as a tool for social change. A number of the community-based ecotourism developments sprouting up around South Africa (e.g. the Simunye ecolodge in the Zulu country) are providing opportunities for sustainable development among local populations.[3]

It is important to remember that the apartheid era ended only a few years ago. A new South Africa is emerging, with great expectations but also considerable risks. The great challenge is to reduce the enormous socio-economic gap between the white and black populations. Ecotourism may play a key role in this endeavour, but that will require major efforts by all the parties involved as well as intensive training programmes.

Belize

Tourism is the biggest contributor to Belize's economy. In 1999 it accounted for approximately 18% of GDP, 25% of total foreign exchange earnings, and one in four jobs.[4] The trend during the past ten years has shown a steady increase in visitation. This small country, with its well preserved rain forests containing a wealth of biodiversity (including many beautiful and interesting tropical birds as well as jaguars), its Mayan archaeological sites and living Mayan culture, and the second longest barrier reef in the world, has an enviable ecotourism resource base to present to the world.

In 1999, the total number of foreign visitors to Belize was 180,795. Total tourism earnings amounted to US$ 111.5 million. There were 145,159 visitors to six key national parks and reserves and to Mayan archaeological sites.

The then Ministry of Tourism and the Environment produced an Integrated Tourism Policy and Strategy Statement in 1991 which re-valued many important assets, widely recognizing that tourism in Belize is totally tied to its diverse natural and cultural resources and that protecting these resources is crucial to the industry's future.

Under an agreement with the Government of Belize, an influential NGO, the Belize Audubon Society (BAS), administrates eight protected areas established under the National Parks Systems Act and other reserves. The Program for Belize (PfB) is a non-profit organization dedicated to the conservation of Belize's natural heritage and to promoting wise use of its natural resources. This organization, designed as a land owning and managing entity, is also engaged in education, public outreach, research and professional training.

The Government has been promoting ecotourism as a strategy and as a developmental model that can protect Belize's rich natural and cultural heritage at the same time that it contributes to the welfare of the Belizean people. Its policy is that ecotourism should be the main focus of the developmental and marketing efforts in the tourism industry.

However, several weaknesses are perceived:

- enforcement of environmental laws and regulations is weak in Belize due to a lack of financial resources;
- institutional capacity is insufficient to carry out the needed land use planning, park management activities, environmental inventories and impact assessments;
- parks do not receive any government funding, the most important being managed by NGO mechanisms; and
- there is a perceived lack of political commitment and compromise to fully engage in implementing conservation programmes and developing a sound ecotourism strategy.

Renewed investor confidence, an integrated tourism strategy and clear policy direction will set the platform for further economic growth while protecting Belize's rich natural and cultural resources.

Ecotourism progress and achievement in other countries

Apart from the three cases briefly described above, the remaining nine BPSP country case studies depict, among many other things, the very different stages of ecotourism development in widely differing countries around the world.

Countries like Canada and Mexico have a long-standing reputation as popular tourism destinations (WTO, 2001). Tourists from the United States constitute by far the largest proportion of foreign visitors to these two countries. A significant share of their foreign visitors take part in conventional activities (city tourism, conventions and shopping in Canada; border tourism, beaches and shopping for hand crafts in Mexico).

Although Mexico is one of the five top megadiversity countries (as regards biodiversity), until the early 1990s most of its protected areas and biosphere reserves were simply off limits to tourism. However, over the last decade organized tours and individual travellers have been discovering and raving about the natural wonders of Mexico. At long last the Government is recognizing the country's enormous ecotourism potential. In the coming years it is to be hoped that Mexico will encourage more organized and planned ecotourism development.

In 2000, the Government and several other institutions published a National Policy and Strategy for Sustainable Tourism which represents a

good inter-sectoral effort and contains valuable guidelines and action plans. Unfortunately, the document appeared only a few months before the end of the previous six-year administration. Hopefully, much of the valuable material contained therein will be considered by the new authorities.

Although very low on the biodiversity wealth scale, Canada is well known for its spectacular outdoors, its magnificent forested mountains, rivers and lakes, and its many adventure tourism options. It is also becoming an important destination for ecotourists. The national park network receives some 15 million visitors per year. However, the following drawbacks impede more sustainable efforts to conserve the Canadian natural environment and to develop ecotourism in a more effective way (Wight, 2001):

- no National Action Plan has been developed from the Canadian Biodiversity Strategy;
- the National Parks System has not yet struck a successful balance between its two main goals, enjoyment and protection of the parks;
- tourism and conservation responsibilities are split among many departments, agencies and levels of government;
- there is not enough practical action, nor are there enough model projects on the ground; and
- there is lack of follow-through on commitment from government and from industry as regards protecting the environment.

However, there are some good recent best practice examples. The Canadian Tourism Commission recently developed a practical study on *Parks and Eco-Adventure Operators: Best Practices in Natural Heritage Collaborations*. CTC also recently created the Ecotourism Product Club (a strategic tourism alliance among Canadian Biosphere Reserves and adjacent communities).

If ecotourism opportunities are to grow in Canada, protected areas must grow and improve their management. As long as tourism and protected areas are seen as competing for a limited land base, the possible synergies between the two will likely not happen.

A common denominator of countries like Peru (seventh in the world on the megadiversity scale), Seychelles and Botswana – which otherwise differ widely – is that tourism is crucial for their national economy, and that there is growing interest on the part of governmental authorities (as well as the tourism industry sector) in developing ecotourism activities.

In Trinidad and Tobago and in Chile, tourism is not a key component of the respective economies of these countries so far. But both countries have valuable natural and cultural resources, and ecotourism is beginning to play an important role. In Trinidad and Tobago, tropical rain forests and wetlands contain a wealth of biodiversity and the Asa Wright Nature Centre has long been an important destination for world birders. Chile contains spectacular Andean landscapes, volcanoes, glaciers and temperate rain forests which are beginning to attract an important number of national and international ecotourists. The Austral Road Project, currently under way, is a major

Tourism and Local Agenda 21s

Anne Vourc'h, Consultant, Urbanis, Avras 11, 14562 Kifissia-Athens, Greece (acch@compulink.gr)

At the request of UNEP's Division of Technology, Industry and Economics (DTIE), a study[1] has been carried out to determine how tourism has been addressed in Local Agenda 21s as they are drawn up and implemented by local authorities. The study is based partly on hands-on experience acquired by several local communities[2] which are involved to varying degrees in tourist activity, and which have adopted a Local Agenda 21 approach. The survey report includes:

- the position of tourism within Local Agenda 21s;
- the utility of the LA 21 process in dealing with problems posed by tourism at destinations and in defining tourism strategies;
- possible limits to this approach as far as tourism is concerned;
- recommendations for improving the way specific tourism-related aspects are taken on board in Local Agenda 21 processes.

Tourism has a major impact on local communities at tourist destinations. It can have positive effects on local development. It can also generate jobs and income. However, tourism threatens these destinations' natural and cultural heritage and the local social balance. Damage to the environment and landscapes, and to cultural diversity and wealth, will have a negative effect on tourism itself in the long run.

Local authorities

Traditionally speaking, tourism development depends to a great extent on initiatives taken by the private sector (i.e. all companies operating in the tourism sector, which has an abundance of small and medium-sized enterprises). For many years local authorities have not really been involved in tourism development. They often have little experience with tourism planning, development and management. But now they are increasingly involved in developing and managing tourism activities due to:

- the trend towards administrative decentralization in many countries, which increases their ability to intervene;
- the peculiarities of tourism activity. While it is the consumer who is brought to the product (and not the other way round, as happens with most other goods and services), the primary tourism product comprises elements which are produced not by the tourism industry but, for example, by geography, history and culture. The attractiveness of the product largely depends on the overall quality of the destination, as well as correct management of "common property" in the form of nature areas, landscapes, beaches, etc.;
- an awakening to the need for a tourism development model that respects the principles of sustainability. Public authorities need to be involved in regulating tourism development at destinations, rather than leaving it up to the laws of the market.

Local authorities have an important part to play in building sustainable tourism through:

- preparing overall strategies for destinations;
- participating in these destinations' enhancement and management;
- balancing the interests of residents with those of tourists, operators and others; and
- generating partnerships, such as between public and private actors.

The international level

Using the experience of local communities and tourist destinations that have already initiated their LA21 process, a certain number of recommendations can be made at various levels. For example, organizations working at the international level (e.g. UNEP, UNDP, UNESCO, WTTC, ICLEI and WTO[3]) have an important role in raising awareness of tourism's impacts on sustainability. These organizations should:

- identify, become more closely acquainted with and better disseminate good examples from tourist destinations throughout the world (established, recent and emerging) that have embarked on LA21 processes or adopted similar approaches under a different name. Tourist communities face specific problems with respect to sustainability, and there is a tremendous need for information exchange. Support for the establishment of networks of sustainable tourist destinations could assist these communities;
- prepare and circulate documents concerning methods and guidelines, tailored to the peculiarities of tourist destinations. Implementing an LA21 process at a tourist destination should involve participation, negotiation and partnerships with tourism operators, carriers and the tourists themselves. Local authorities need to increase their know-how in this regard;
- acquire more knowledge about public demand for sustainable tourism and circulate it among communities. Destinations are rallying round and accepting their roles with respect to sustainable development at the local level, and to the development of corresponding supply (e.g. the sustainable destinations concept, ecotourism products). Yet they question the reality of market demand and visitors' willingness to pay for this type of visit;
- increase mobilization in the economic sector of tourism concerning sustainability, and disseminate good examples of partnerships between private companies and local authorities at destinations;
- make international public opinion and tourists aware of sustainable

endeavour to communicate Chile's southern regions with the rest of the country. Since 35% of Chile's total protected area will be affected by this project, it is of utmost importance that this highway not negatively impact the rich environmental heritage of this part of the country. It is to be hoped that ecotourism will become the main tourism activity.

Countries like Kazakhstan and Korea are just starting off in the ecotourism development process. Both of these countries have a wealth of ecotourism attractions, and their governments are starting to show strong interest in developing these attractions' ecotourism potential.

To conclude: it is difficult at the beginning of the 21st century to find a country that is not developing, or at least interested in developing, ecotourism as a tool for biodiversity and cultural conservation and as an instrument for sustainable development, especially in rural areas. In 2002, which has been declared the International Year of Ecotourism by the United Nations, it is to be hoped that ecotourism will receive a worldwide impetus that will definitely transform it into the engine of biodiversity conservation and sustainable development it has been promising to be over the last two decades or so.

Notes

1. Factual information and statistics for Costa Rica taken mainly from Zamora and Ovando, 2001.
2. Factual information and statistics for South Africa taken mainly from Spenceley, 2001.
3. See the article "Local community benefit systems at two nature-based tourism operations in South Africa" by Anna Spenceley on page 50.
4. Factual information and statistics for Belize taken mainly from Pat, 2001.

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tourism, and support and increase awareness of codes of behaviour relating to tourism;

- identify, broadcast and promote labelling for sustainable destinations, based on reliable and transparent criteria.

National authorities

National authorities also have an important role to play in creating conditions for more sustainable development of domestic tourism, and in providing support for tourist destinations involved in LA21 processes. They should:

- develop national sustainable tourism strategies based on dialogue with the private sector, local authorities and NGOs;
- use their statutory powers (particularly relating to transport) to create conditions for more sustainable tourism;
- better mobilize administrations and other national tourism organizations towards sustainable development, an area which still tends to be addressed largely by environmental administrations and NGOs;
- launch national campaigns to inform communities (especially tourist communities), encourage them to embark on LA21 strategies and action plans or global approaches, and support them in their efforts. Countries like the United Kingdom where this type of campaign has been launched have seen a large number of local authorities come out in favour of LA21s;
- strengthen capacity building in local communities and encourage networking, particularly between communities in the same major tourist region.

Working towards sustainable tourism

One of the most important challenges for tourist destinations is to strive towards sustainable development of communities. All tourism destinations should initiate Local Agenda 21 processes, and tourism enterprises and organizations should ensure that their initiatives become part of the local authority's Local Agenda 21 efforts. In relatively non-tourist municipalities, the Local Agenda 21 strategy or action plan should include the tourism sector as well as other business sectors.

There are documents published to help local communities implement LA21 processes which provide recommendations to this end.[4] Some aspects are specific to the tourism context:

- Since by definition tourism cuts across all sectors of activity, LA21 leadership within a tourist destination's local authority should be at the local executive level (mayor or president of the community). This will also enable all departments in local administration to be brought in (as well as relevant bodies at other levels, e.g. regional, national);
- Particular care should be taken to integrate the sustainable tourism project into the community's sectoral activities – e.g. environmental protection, land use planning, tourist marketing, management of tourist services, economic development – using appropriate management tools;
- The local population should be at the heart of the community's sustainable tourism project. Projects should reflect the aspirations of the local population, which should participate actively in preparing them and drawing up action plans;
- Partnerships between public authorities and the private sector (which provides and markets the tourist supply) are essential at tourist destinations. Economic players should be involved at a very early stage in the LA21 process, so they can work together to construct a shared vision of the destination's sustainable development;
- A sustainable tourism project should be based on an objective assessment of the tourism situation and its positive and negative impacts on the community. Prospects for developing more sustainable tourism should also be worked out, depending on available natural resources and the area's carrying capacity;
- Particular care should be taken to introduce qualitative and quantitative criteria for the sustainability of local tourism development, as well as indicators for assessing local conditions and how they evolve. Besides indicators created for study purposes, a small number of simple indicators should be developed to allow communication with residents, companies and tourists. It is important for everyone to be in a position to measure progress on the long road towards sustainable tourism;
- A sustainable tourism strategy would be pointless if it did not include demand (i.e. tourists and visitors) as well as tour operators. Partnerships with domestic and foreign tour operators and tourists should be included in local sustainable tourism strategies, and should therefore be strongly developed.

Notes

1. UNEP, *Local Agenda 21 and Tourism* (forthcoming).
2. Bournemouth (UK), Winchester (UK), Storstrom County (Denmark), Calvià (Balearic Islands, Spain), Marie Galante (French Caribbean).
3. For more information on the WTTC (World Travel and Tourism Council), ICLEI (International Council for Local Environmental Initiatives) and World Tourism Organization (WTO), see their web sites: www.wttc.org, www.iclei.org and www.world-tourism.org.
4. ICLEI (International Council for Local Environmental Initiatives) (1996) *The Local Agenda 21 Planning Guide*; WTO (World Tourism Organization) (1999) *Guide for Local Authorities on Developing Sustainable Tourism*.

The Takitumu Conservation Area: a community-owned ecotourism enterprise in the Cook Islands

Anna Tiraa, PO Box 244, Apia, Samoa (anna.tiraa@lesamoa.net)
Ian Karika Wilmott, CASO, Takitumu Conservation Area, PO Box 3036, Rarotonga, Cook Islands (kakerori@tca.co.ck)

Summary
The Takitumu Conservation Area was created in 1996 on the island of Rarotonga in the Cook Islands. Its main purpose is to conserve biodiversity for the benefit of present and future generations. Only local people own the land and its resources. Ecotourism will be the area's main economic activity. A guided nature walk has been organized with landowner agreement and support.

Resumé
La reserve de Takitumu a ete creee en 1996 sur l'ile de Rarotonga, dans les iles Cook. Son but principal est de preserver la diversite biologique au profit des generations actuelles et futures. La terre et ses ressources appartiennent exclusivement a la population locale. L'ecotourisme sera la principale activite economique de la zone. Des randonnees guidees avec decouverte de la nature ont ete organisees avec l'accord et le soutien des proprietaires terriens.

Resumen
El Area de Conservacion de Takitumu fue creada en 1996 en la isla de Rarotonga, en las Islas Cook. Su principal objetivo es conservar la biodiversidad en beneficio de las generaciones actuales y futuras. Las tierras y los recursos pertenecen exclusivamente a los pobladores locales. El ecoturismo constituirá la principal actividad economica de la zona. Se ha organizado una caminata guiada por la naturaleza, que cuenta con el acuerdo y el apoyo de los propietarios del lugar.

> *For so long we landowners have been left out in major developments concerning our lands. It is the normal procedure for Government to tell us that they would like to develop our land. Because we are told it is in our best interest, we agree. They then go ahead and develop the land without our input. This project is a major step forward in listening and involving us.*
>
> **Rarotonga landowner**

The Cook Islands in the South Pacific are made up of 15 islands spread over an ocean area of 1,830,000 square kilometres (between 9° and 23°S latitude and 156° and 167°W longitude). Total land mass is only 237 square kilometers. Tourism is the main source of foreign exchange.

The Takitumu Conservation Area (TCA) is on Rarotonga, the largest island. Forested, with an area of 155 hectares (380 acres), it is located in the southern part of Rarotonga (**Figure 1**). The TCA's overall aim is to conserve biodiversity for the benefit of present and future generations of Cook Islanders and others.

In 1987, the Cook Islands Conservation Service initiated a bird recovery plan to help save Rarotonga's unique and endangered Kakerori bird *(Pomarea dimidiata)*. Only 38 birds remained; this figure had fallen to 29 two years later. Studies showed that ship rats *(Rattus rattus)* were largely responsible for the Kakerori's decline. In August 2000, through the Kakerori Recovery Programme (KRP), the Kakerori population had grown to over 200.

Throughout 1995, the Environment Service (the government agency responsible for environment) discussed with the traditional leaders and landowners of the Kakerori's core breeding area the idea of creating a Conservation Area (CA) on their land. At first the landowners were suspicious. They believed that if they agreed to designate their land as a Conservation Area, this would become its legal status and their continued ownership would be threatened.

During consultations, it was emphasized that designation as a Conservation Area would not involve legal proceedings but only a verbal agreement. The owners would still control their land. In time this assurance was accepted by the owners. The three valleys that make up the TCA were declared a Conservation Area by the three major landowning tribes (Kainuku, Karika and Manavaroa) in early 1996.

Planning and management

Establishment of the TCA was facilitated by the Environment Service, under the auspices of the South Pacific Biodiversity Conservation Programme (SPBCP), and executed by the South Pacific Regional Environment Programme (SPREP). The landowners' declaration has not been made part of legislation or formally recorded, as there remains some element of belief that access to their land would be restricted if the land were formally declared to be a Conservation Area.

The SPBCP was deemed an appropriate source of support for the establishment and implementation of the project, as it recognizes the land tenure situation in the Pacific countries and the fact that the resources found in this area are used by local people for sustenance. SPBCP funding, initially made available to the TCA for three years, was extended for another two years. This funding ceased at the end of June 2001.

The TCA project has not been without its problems. The first year was a difficult one. The concept of empowering landowning clans to conserve the environment had been all but lost when western-style government came into existence. In addition, the bureaucracy associated with provision of aid money was unfamiliar to those outside government.

TCA planning and management is carried out by the Conservation Area Coordinating Committee (CACC), a core committee consisting of six representatives from the landowning tribes. The CACC meets on a regular basis to discuss issues relating to the project. It takes all major decisions with respect to the TCA.

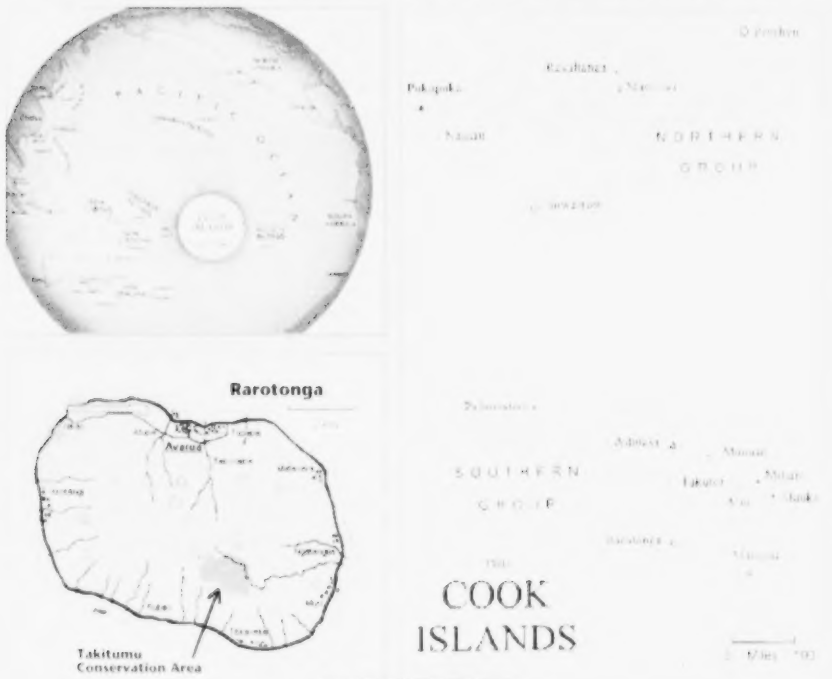
The Environment Service was involved in the project design and acted as a facilitator, providing technical advice during the project's initial phases. It has since stepped back and left management of the TCA to the landowners.

An agreement reached between the government of the Cook Islands and the landowners has allowed the CACC to execute and manage funds from the SPBCP. This was an unusual move, as SPREP is an intergovernmental organization responsible to its member country governments.

Under CACC management, the scope of the TCA Project was broadened to include:

- the existing Kakerori Recovery Programme;
- wider environmental concerns such as biodiversity;

Figure 1
The Cook Islands, the island of Rarotonga and the Takitumu Conservation Area



- sustainable development; and
- community involvement and environmental awareness.

On a day-to-day basis, the project is run and managed by the Conservation Area Support Officer (CASO), whose salary has been fully paid by the SPBCP. Other project staff members include a Conservation Officer/tour guide, who has been partially supported by the SPBCP, and a Technical Adviser funded since 1999 by the SPREP's Avifauna Programme. Monitoring by the SPBCP has involved quarterly progress and financial reports.

Geological and biological features

Rarotonga is a volcanic island about 2.5 million years old. Much of the TCA consists of steep, dissected, forested country with ridges formed by volcanic dykes. About a third of Rarotonga's drinking water comes from the TCA. Management of this area therefore helps protect the island's most important watershed area.

Three types of vegetation are present: upland forest, disturbed forest/scrub, and fernland. About 70% of all inland Rarotonga's plants are found in this area, including a number of endemic species. Bird life in the TCA is diverse. All four native breeding land birds are found in the TCA, including the island's other endemic species, the Rarotonga starling.

Community use

The three landowning groups comprise a large number of individuals. Although there are many TCA landowners, no one actually lives there. Most inhabitants of Rarotonga live on the coastal plain.

The endangered Kakerori

Existing community use of the TCA is limited to recreational activities such as walking and collecting coconuts and coconut fronds, mountain bananas and chestnuts. Harvesting of freshwater prawns and eels, and recreational hunting of the Pacific fruit bat and Pacific pigeon, were common in the past. These practices are now discouraged in the TCA. Groups such as Outward Bound (which runs a challenging course for adults and young people at least 14 years of age), and school and church youth groups, sometimes visit the area for training and educational purposes.

Sustainable income-generating activities

To assist with efforts to be self-reliant following the end of SPBCP funding in June 2001, income has been generated since 1997 through two activities: nature walks, and sales via a "one-stop environmental shop". TVA nature walks are the primary source of income. The TCA office doubles as the environmental shop, where t-shirts, posters, calendars, books, videos and other items are sold.

Guided nature walks were an obvious choice for income generation, as there is already a well established tourism industry in the Cook Islands. The number of visitors to the Cook Islands has remained at around 60,000 during the last three years.

History of the ecotourism project

In early 1997, work to accommodate guided walks began in the most accessible of the three TCA valleys, Turoa. This consisted of track development, installation of interpretative signs, safety ropes and an entrance gate, and upgrading of the main road giving access to the area. Planning for an interpretation shelter was initiated in 1996, with construction beginning the following year.

In August 1997, the SPBCP and NZODA (New Zealand Overseas Development Assistance) funded a two-week regional community-based ecotourism workshop in Kosrae, Federated States of Micronesia. Two representatives of the TCA project attended. The knowledge gained at this workshop helped in the development of ecotourism in the TCA.

Following the Kosrae workshop, the TCA project held a three-day locally based community workshop in September 1997 to assist ecotourism development. This workshop also served to create ecotourism awareness, and to involve the community in developing ecotourism in the TCA.

Guidelines were prepared in 1998 for the landowners, as managers of the TCA, in consultation with the CACC and key stakeholders. The purpose of the management guidelines is to ensure sustainable management of the TCA now and in the future.

Nature walks

In 1998, 298 tourists visited the TCA. The following year saw a 74% increase, to 518 (Figure 2). There were 539 visitors in 2000. Tourist visits generated NZD 540 in 1997 and NZD 19,167 in 2000.

The Takitumu nature walks were established to help provide money to sustain the Kakerori Recovery Programme, as well as to provide the landowners with a small income to encourage them to retain the Conservation Area and with its special values.

These nature walks are fully guided four-hour tours. They started off small (half-day tours one day per week in 1997) and grew as tourist interest increased. More staff were added to strengthen the CACC's capacity to run such an operation. The walks were extended to two days per week in 1998. They have gained such popularity among tourists that in early 2000 they were further increased in number. They now take place Tuesday through Friday from 9.30 am to 1.30 pm.

Table 1 presents a breakdown of the costs associated with the nature walks.

The nature walks are popular for several reasons. These include:

- the conservation value attached to the TCA project;
- the chance to see the endangered Kakerori and other birds;
- a knowledgeable tour guide with good people skills, who is very popular with tourists;
- tracks of varying levels of difficulty, which provides a degree of flexibility (especially for older/less able tourists);
- increased awareness by tourists, as a result of marketing and word of mouth; and
- an increase in the number of tourists, due to the addition of another international airline operating from October to April (during the northern hemisphere's winter months).

Marketing

The TCA nature walks currently appeal to a niche market of nature and bird enthusiasts and are marketed as such. They are promoted in a number of ways, including brochures, signs on the main road, and *Jason's What's On* and *Jason's Passport Map* (free publications for tourists which advertise tourism operations in the Cook Islands). Advertisements for the TCA have appeared on three different Internet sites.

Other means of making the nature walks better known include the TCA newsletters, and articles and advertisements in travel publications. Commissions of 15% for one to nine persons, and 20% for groups of ten or more, are paid to agencies that sell TCA tours. Word of mouth has also helped promote the nature walks.

Based on a visitor survey conducted between January and September 1999, the four most common methods used to attract nature walk participants were brochures, word of mouth, *Jason's What's On* and *Jason's Passport Map*. The largest visitor age group was between 40 and 60 years old.

Two other inland tours operate on Rarotonga. One operator offers bush treks and the other uses four-wheel drive vehicles to take visitors on rugged inland "safaris". Both attract tourists in all age groups. The former offers adventurous and more gentle walks on different days; the safari is marketed more as an adventure tour in a 4WD jeep. Neither company offers TCA tours.

TCA management believes the TCA has the potential to increase the number of its visitors to 3120 per year. This would represent an annual turnover of NZD 140,400.

Distribution of profits

Management has established a system to ensure that any profit generated is distributed fairly and in such way that all the project's major aspects are provided for in the future.

The distribution figures were derived in full consultation with the CACC and formalized in the management guidelines. However, they are flexible and are reviewed from time to time to assess their appropriateness to the current situation. Profits due the landowning groups are distributed by the project on a yearly basis. With the consent of the family, payment is made to its representative to the CACC. Each family group has its own arrangement with respect to how this money is spent. The project takes no position on how landowning groups utilize their share of the profits. If requested, however, it is willing to advise family groups on investing their profits.

The Kakerori Recovery Programme (KRP)

The seven-month Kakerori Recovery Programme consists of two major activities:

- controlling rats with poison from September to December, which helps the Kakerori breed successfully; and
- monitoring population trends, which involves undertaking an annual census and noting breeding successes.

There are plans to transfer ten young birds to the island of Atiu, which is free of ship rats. This should ensure the bird's continued survival. The TCA landowning communities and the people of Atiu have given their full support to the transfer.

Figure 2
Number of TCA visitors in 1998 and 1999

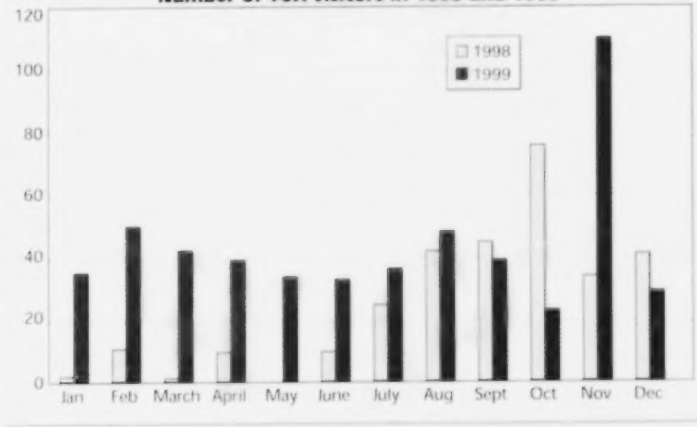


Table 1
Breakdown of costs of nature walks (New Zealand dollars)

Gross income, per person	35.00
Costs	
Taxi service	6.00
Lunch	3.00
Purified water	.50
Tour guide	4.00
Advertising	2.00
Agents commission 15%	5.25
Total Cost	**20.75**
Taxable income	14.25
Tax @ 20%	2.85
Net income per visitor	**11.40**

Table 2
Profit distribution

Land rental: Profits generated from nature walks and sales distributed equally between the three landowning groups	35%
Kakerori Recovery Programme: Provides support for control of predators (mainly rats) and monitoring of population trends; donations by tourists and members of the public also assist this programme	20%
CA development: Provides infrastructure and information for TCA users	20%
Administration: Assists implementation of day-to-day activities of the Manager and staff; includes oversight of the project by the Committee	15%
Stock: Purchase of goods for one-stop environmental shop	10%

Discussion

Although the TCA ecotourism venture is generating increasing revenues for the project and its landowners, it is obvious that current income generating activities cannot sustain the project at its existing level after 2001.

In the future, current activities will need to be downsized. SPBCP support of about NZD 72,000 per year exceeds the amount presently generated by the nature walks and product sales of NZD 11,500 (less 35% for land rental). The two principal components (i.e. the KRP and the ecotourism venture) will need to be maintained to continue pursuing the overall objective of the project. The Kakerori is still considered endangered. According to *BirdLife International* criteria, once the population reaches 500 it is removed from the "endangered" category. It is highly unlikely that the nature walks will completely fund the KRP at their present level (about NZD 35,000 per year).

When needed, landowners provide some voluntary labour. The reality of living in a largely cash-based society has meant that formal work and other commitments by landowners prevent use of voluntary labour on a more regular basis. The TCA has utilized international volunteers to assist with some of the arduous work within the area. International volunteers have a strong appreciation of the environment and are keen to assist with worthy projects. This relieves the need for large community input into the TCA's more laborious tasks. The experience is not all one-sided, as volunteering provides an opportunity for a comparatively low-cost holiday. For younger volunteers, it also offers an opportunity to gain valuable experience in their chosen fields and improve their CVs.

The perceived negative impacts of establishing the TCA are that hunting (fruit bats, pigeons, freshwater prawns and eels) and timber harvesting, as carried out in the past, have been restricted due to the landowners' wish to ban these activities in the area. The TCA represents about 1% of Rarotonga's total forested inland area; these activities are permitted on other parts of Rarotonga. Other impacts include soil erosion from small-scale track development and, as the number of TCA visitors increases, greater potential for accidental introduction of exotic plant species into the area.

TCA management is exploring options for enhancing and expanding its tourism product. A Tour Guiding workshop was organized in 1999, with an emphasis on bird watching. The majority of participants came from the outer islands. At this workshop it was agreed to establish a combined outer island bird-watching tour. The project has since initiated bird tours to four outer islands. These tours involve spending a day and night on the islands to observe unique birds.

Although the TCA has good tracks with varying levels of difficulty, specific days for adventure

or more gentle walks have not been designated. If a tour contains a mixed group of young and old visitors, it is up to the guide to determine the best course of action. Since older people are the most common age group to visit the TCA, most nature walks are gentle. Based on experience and feedback from visitors, there is demand for more strenuous walks.

Other components and commitments of the TCA project to be fulfilled under the SPBCP have meant that income-generating activities could not be concentrated on exclusively. Thus, ecotourism has gained momentum slowly against a major competitor which began operations after the TCA. The money derived from nature walks is spread thinly in the TCA project. Compared with other inland tour operators which are owner-operated, there are lower financial rewards for individuals than would be the case in an owner-operated business.

The lack of committed tour guides is a matter of concern. The project has hired several guides in the past, but most lose interest after staying only a short period. It is unclear why the guides leave. We can only surmise that issues such as remuneration, boredom, and the amateur status which the job has been given may be factors. In view of the increasing number of visitors to this area, tours may be negatively affected by relying on only one guide. Additional SPBCP funding has made it possible for other TCA staff members to act as back-up guides when the main guide was not available.

Excessive fragmentation of land ownership, resulting from changes in the land distribution system since colonization, means it is not uncommon for there to be large numbers of owners of blocks of land on Rarotonga. This is the TCA's case. Land issues (especially those relating to economic details) can be rather sensitive for landowners to deal with among themselves.

The number of landowners in the TCA and the split of profits between the three land-owning tribes make it difficult for landowners to receive significant financial benefits. Nevertheless, there are potential long-term benefits. For example, if the tribes invested their share of the profits in a trust fund, the money could be used for scholarships for landowners' families or for community projects.

Lessons learned

The TCA project has relied heavily on CACC members to keep their extended families informed. Educational and awareness activities have also provided information to landowners and to the general public concerning the project as a whole. However, they have not been entirely effective at informing landowners about the economic particulars of the ecotourism venture.

It has been found that direct regular consultation with the wider landowning groups is a better way to relay the economic details generated by the ecotourism venture. This was demonstrated when the project held a meeting for one of the landowning tribes at the end of 1999. Lack of knowledge and misunderstandings existed on the part of many of those at the meeting concerning the funds generated by the ecotourism venture. Misconceptions were clarified at the meeting.

CACC member and visitors with sign made locally for the TCA

Under current accounting procedures, there is an equal distribution of 35% of the profits to the three land-owning tribes. It is important that among the landowners there is total openness about how the money is being distributed. Ongoing consultation with the wider community is essential for the support of the project, not only in monetary terms but also in terms of continuing to achieve the TCA's aims in the long term.

Empowering landowning communities has given them the will and determination to make this project succeed. The project has drawn attention to the importance of conserving biodiversity throughout Rarotonga and inspired other communities to develop similar projects.

It may be premature at this stage to present the lessons learned. Most lessons will be learned after funding from the SPBCP ceases and when the ecotourism business has operated independently over a period of time.

Conclusions

To continue to work towards the aims of the TCA beyond 2001, the project will need to consider operating as an environmental NGO and actively seek funds to achieve goals that otherwise might not be realized.

It may prove difficult for a group of landowners to operate an ecotourism business effectively and efficiently. In the future, management might consider privatizing the nature walks, with royalties paid to the TCA and to landowners (e.g. five dollars per tourist).

The TCA project has boosted the capacity skills of the TCA staff, not only the skills needed to run an ecotourism operation but also, for example, scientific, management, administration and interpersonal skills. Staff members attended training courses locally and regionally during the period of SPBCP funding.

Through the TCA project, the knowledge gained from operating an ecotourism venture has been shared with other local people.

Apart from the ecotourism venture's financial rewards for landowners, benefits include:

- three landowning groups working together to achieve a common goal;
- increased appreciation of conservation values;
- training of local people in the scientific aspects of the KRP;
- passing on of local knowledge of resources found in the area, and their traditional uses, to other locals; and
- employment for local people.

It can be argued that the TCA is probably the only true "ecotourism" venture in the Cook Islands, in the sense that it gives something back to the communities and is conserving part of our unique natural heritage. The project is implemented and owned by local people.

Education about the TCA and its biodiversity is a major part of the experience gained by tourists from the nature walks. However, it must not be forgotten that local people also need to be educated. Long-term and focused educational and awareness activities are essential to increase the level of appreciation of — and support for — the TCA and its objectives.

As part of its transition to the imminent discontinuation of SPBCP funding, resources for the project's educational component have been minimized. The project is now seeking alternative funding to support some educational and awareness activities. This raises the issue of who will seek funds for this component once SPBCP ceases supporting personnel.

As the ecotourism business thrives and grows, landowners (as custodians of the project) should not lose sight of the TCA's original objectives, i.e. to conserve biodiversity for the benefit of present and future generations of Cook Islanders and others.

With encouragement and continued emphasis on the importance of biodiversity conservation, an increasing number of landowners have begun to appreciate the project's aims and give further support to the TCA. The fact that the project belongs to the landowners has been a big factor in achieving landowner commitment. However, the

real test of sustainability will come after SPBCP financial support for the project ends.

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Meitaki Maata e Kia Manuia

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Monitoring sustainable tourism in Samoa

Louise Twining-Ward, c/o UNDP, Private Mail Bag, Apia, Samoa (walkabout@samoa.ws)

Tourism is an increasingly important sector of the Samoan economy. It also has a valuable, and as yet under-utilized, contribution to make towards social and environmental development in Samoa. But tourism is a vulnerable industry, especially on a small island where its resources can easily be damaged by pollution or inappropriate development. If Samoa's tourism sector is to be successful in the long term, it must address these concerns. A strategy needs to be developed to ensure that the resources on which the industry and country depend (the attractions, infrastructure, facilities and services that make up the tourism product) are not put in jeopardy.

In November 1998, the Samoa Visitors Bureau (SVB), supported by New Zealand Official Development Assistance (NZODA), embarked on a project to set up a monitoring scheme for sustainable tourism in Samoa. The aim of the project was to develop a clear set of sustainable tourism objectives and identify a practical and user-friendly set of indicators to monitor progress towards these objectives. A team of experienced individuals from government, the private sector, educational establishments and intergovernmental organizations was set up to assist this process.

The 12 members of this voluntary committee provided expertise and advice throughout the project, ensuring the validity of the research and participation by a wide range of stakeholders, and giving weight to the project's findings and recommendations. The three main parts of the project were:

- establishment of sustainable tourism objectives;
- selection of indicators; and
- setting up a sustainable tourism action plan.

Establishment of objectives

The reason for establishing sustainable tourism objectives was to clarify exactly what sustainable tourism means, not in the international context but in the context of Samoa. In January 1999, the SVB set about gathering information from local specialists, the tourism industry and rural stakeholders in order to develop its own sustainable tourism objectives. After numerous consultations, drafts and re-drafts, the final list of 12 objectives was completed on 7 May 1999 (**Table 1**).

Samoa's sustainable tourism objectives set the targets for the future of tourism in Samoa. They show how tourism's potential can be utilized, not only for economic ends but also to achieve environmental, social and cultural development. These objectives can be used as the basis for tourism action plans, to assist operators in considering the wider implications of their businesses and to serve as the benchmarks against which indicators can be used to evaluate tourism.

Selection of indicators

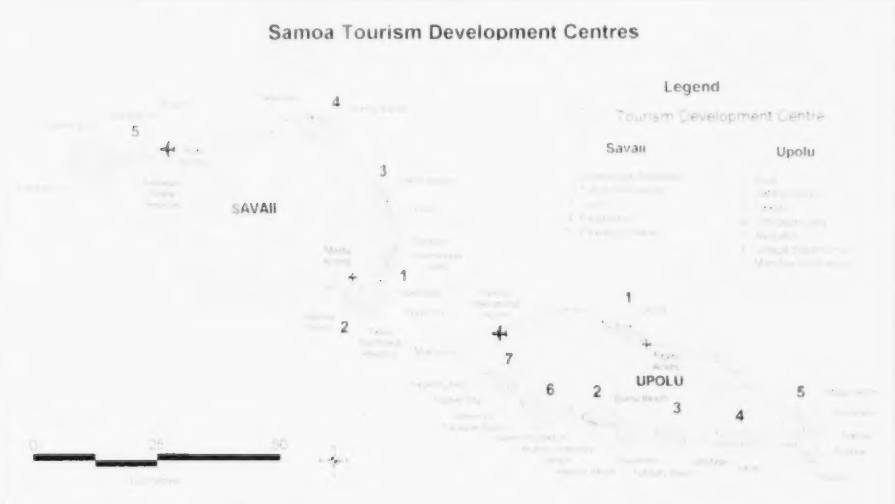
With Samoas sustainable tourism objectives in place, there was a clear need to develop sustainable tourism indicators to monitor performance. In the past, the tourism industry has relied on economic indicators to gauge its success. However, these only tell part of the story. The number of tourist arrivals tells nothing about the impact of tourism in rural areas, and the amount of money tourists spend tells nothing about where the money goes. Sustainable tourism indicators focus on the linkages between tourism resources and the country's environment and culture, giving a more holistic picture of the sector's performance as well as the tools for anticipating adverse situations. The indicators should provide the impetus for action before valuable assets are irreversibly damaged.

Key results from 1999

To be effective, Samoa's sustainable tourism indicators had to be carefully selected to suit the situation in Samoa, the expectations of tourism stakeholders, and the research capacity and resources of the SVB. The aim was to develop one or two indicators to monitor each sustainable tourism objective. The Project Advisory Committee brainstormed a total of 270 indicators. Over several months these were tested, screened and finally reduced to the core set of 20 workable indicators.

The indicators, along with the key results from 1999, are shown in **Table 2**. To make the indicator results easy to understand, the table has been divided into sections. In the first section are the "critical" sustainable tourism indicators. These are the key indicators for assessing the overall sustainability of tourism in Samoa. Following the key indicators are environmental, economic, social and cultural indicators. To help users understand the indicator results, an acceptable range has been calculated for each indicator. This range represents the desirable performance for the indicator. The indicator's performance has been rated good, acceptable, poor or very poor according to how close the actual result comes to the acceptable range.

Results from the first year of monitoring do not show trends over time, but they do provide a snap shot of the state of sustainable tourism in Samoa in 1999. They make it clear that it is time for action. Too many indicators fall short of their acceptable ranges, and many of those rated "acceptable" are at the bottom end of the scale.



(Source: Tourism Development Plan 1992-2001)

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Anna Tiraa, an environmental consultant temporarily based in Samoa, was the TCA's Conservation Area Support Officer (CASO) from 1996 to 1999. She belongs to the landowning group Ngati Manavanui. Iati Karika-Wilmott was chairman of the CACC from 1997 to 1999. He took over the CASO position in 1999. He is a member of the landowning group Ngati Kariki. ◆

Table 1
Samoa's sustainable tourism objectives

Economic objectives
• Stimulate appropriate employment and income-generating opportunities in rural areas
• Enhance the economic benefits of tourism activities for the Samoan economy
Environmental objectives
• Encourage the sustainable management of land, particularly forest resources
• Promote the careful management of coastal and marine resources, particularly coral reefs
• Encourage proper waste management practices at national and village level
• Improve the quality and reliability of water supply to all areas
Tourism objectives
• Improve the quality of tourist facilities and services
• Ensure that tourism development is carefully planned, in keeping with the natural and cultural environment
• Enhance awareness and commitment to sustainable tourism in Samoa
Social and cultural objectives
• Heighten tourism awareness and education, especially in rural areas
• Foster respect for the FaaSamoa* in all tourism activities
• Encourage widespread participation and skills in performing arts and crafts

*Traditional Samoan way of life

Table 2
Samoa's sustainable tourism development indicators

	Result	Acceptable range	Performance
Critical sustainable tourism indicators			
Tourist landscapes under threat from development	20%	0-5%	Very poor
New hotels undertaking environmental assessment	33%	90-100%	Very poor
Evaluation of quality of key tourist attraction sites	35%	60-80%	Poor
Tourism operators using sustainable tourism practices	38%	60-80%	Poor
Hotel staff going on training courses	27%	25-50%	Acceptable
Environmental sustainable tourism indicators			
Hotels using secondary or tertiary sewage treatment	8%	30-50%	Very poor
Tourist participation in nature tourism	8%	20-40%	Very poor
Tourism village participation in land conservation	26%	50-75%	Poor
Tourism village participation in marine protection	42%	50-75%	Poor
Tourism sites passing Samoa Water Authority (SWA) water quality tests	50%	70-90%	Poor
Tourist participation in marine tourism	23%	20-40%	Acceptable
Hotels composting their biodegradable waste	76%	60-80%	Acceptable
Water usage per guest night in hotels (litres)	928*	500-1000	Acceptable
Economic sustainable tourism indicators			
Contribution of direct tourism businesses to GDP	4%*	10-20%	Poor
Proportion of new businesses focused on tourism	4%	10-20%	Poor
Proportion of hotel jobs in rural areas	48%	40-60%	Acceptable
Social and cultural sustainable tourism indicators			
Villages included in tourism awareness programmes	28%	25-50%	Acceptable
Proportion of traditional events in tourism festivals	50%	50-70%	Acceptable
Proportion of handicraft stalls in the markets	21%	20-40%	Acceptable
Tourism operators informing visitors of village protocol	72%	50-70%	Good

* 1998 data

warning of possible problems to come.

Looking at the five critical sustainable tourism indicators, two were rated very poor, two were poor and one was acceptable. The highest-scoring indicator this year was the number of tour operators providing visitors with information concerning village protocol. The best improved indicator among those for which several years of data were available was the increase in hotel employment opportunities in rural areas.

Action Plan for 2000

Poorly performing indicators are warning signs that things are not progressing the way they should. To secure tourisms long-term sustainability, action needs to be taken to put these indicators back on track. These ten areas were the focus of Samoa's Action Plan for 2000:

1. environmental assessment;
2. tourist landscapes;
3. hotel sewage treatment;
4. water quality;
5. nature tourism;
6. attraction sites;
7. conservation efforts;
8. new tourism businesses;
9. tourisms contribution to GDP;
10. sustainable tourism practice.

Future perspective

Initial project development has now been successfully completed and tested, and the SVB has agreed to the following:

- that the *Indicator Handbook* and *Sustainable Tourism Status Report* be released for public access;
- that *Samoa's Sustainable Tourism Objectives* be considered for possible inclusion as part of the forthcoming Tourism Development Plan;
- that Samoa's sustainable tourism indicators be monitored annually, the results published in a timely manner, and appropriate management responses taken as part of the annual work programme of the appropriate SVB Divisions;
- that the monitoring of Samoa's sustainable tourism indicators be coordinated on an annual basis by the SVB Manager of Planning and Development, with the support of the Manager of Research and Statistics; and
- that the ongoing commitment of the Project Advisory Committee be officially recognized and supported.

The Government's *Statement of Economic Strategy 2000-2001* also stresses the importance of the sustainable tourism indicators. Government commitment, along with assurances from the General Manager of the SVB given at the third Annual Samoa Tourism Association Convention on 27 May 2000, effectively secure the future of the monitoring project.

Regional perspective

Although the sustainable tourism objectives and indicators developed for use in Samoa will not necessarily be applicable for use to other areas, the methodology provided in the *Indicator Handbook* could be adapted for use by other small islands, setting the stage for more sustainable tourism operation at a regional level. It is hoped that this demonstration of the development and success of the sustainable tourism monitoring project in Samoa will inspire other island nations in the region to take up this challenge.

This article is basically the Executive Summary of *Indicator Handbook – A Guide to the Development and Use of Samoas Sustainable Tourism Indicators*. It is reproduced with the kind permission of the South Pacific Regional Environment Programme (SPREP), 2001. Support for this project was provided by the New Zealand ODA and the Samoa Visitors Bureau.

Indigenous peoples, NGOs and the International Year of Ecotourism

Rodney Bobiwash, Director, Forum for Global Exchange, Center for World Indigenous Studies, PO Box 19001, 360-A Bloor St. W. Toronto, Ontario, M5S, Canada (abobiwash@cwis.org; www.cwis.org)

As the International Year of Ecotourism 2002 opens, there is a great deal of uncertainty about the implications for Indigenous peoples of IYE 2002. Indigenous peoples inhabit many areas of the world which remain unspoiled by progress or development. It is recognized that two of the fastest growing sectors of the tourism industry are ecotourism and cultural tourism. States have therefore been wholeheartedly embracing economic development strategies tied to the tourism industry's development.

According to Joan Carling of the Cordillera Peoples Alliance in the Philippines (a regional Indigenous representative body), every administrative region of the Philippines has been directed by the central government to develop local tourism plans and initiatives. The most lucrative areas will be in the lands of Indigenous peoples.

In Southern Mexico, Plan Puebla Panama, the Northern Isthmus project, and the creation of the Meso-American Biosphere Corridor will have significant impacts on Mexico's primarily Indigenous communities, specifically communities in the states of Oaxaca and Chiapas. Much of the infrastructure being developed in southern Mexico is intended to facilitate increased tourist traffic. The development of national parks and other protected areas in state jurisdictions often poses particular problems for Indigenous people and local communities, who may rely upon those areas for subsistence economies or for spiritual uses. The social and cultural impacts of ecotourism on Indigenous and local communities must be weighed equally with environmental impacts.

The concerns highlighted above (and others) have brought together Indigenous communities and NGOs concerned with local development and Indigenous issues, in an alliance to bring clear focus and analysis to the issue of ecotourism and its impacts on Indigenous and local communities. Spearheaded by TIM-TEAM (Thailand), the campaign has sent letters to UN Secretary-General Kofi Annan and issued statements to the UN General Assembly. The concerns raised in these communications have focused around IYE 2002, as reflected in the name "International Year of Ecotourism", and a call that:

- the name should be changed to the "International Year of *Reviewing* Ecotourism";
- the economic hegemony of Northern corporations' control over the tourism industry in the South should be examined, to determine what real benefits from ecotourism exist for the South;
- ecotourism as an economic strategy in the developing world should be integrated into existing macroeconomic structures, and not be the dominant economic sector for economic development;
- ecotourism as an economic strategy should be conducted in an integrated way with regard to social and environmental conditions and issues of local political concern.

There are concerns that the IYE will contribute to the growing polarity between North and South by deepening the current pattern of exploitation of the South by the North, and by entrenching unequal economic relationships that need to be challenged under mechanisms like the World Trade Organization; and

- the lack of funding committed to the IYE by the United Nations will mean the critical voice represented by NGOs and Indigenous nations will be lost, as the cost of participation in IYE events will be prohibitive without financial support.

With these issues in mind, the NGOs have made three specific recommendations:

- to put forward, at the UN General Assembly, a clear statement of purpose and guidelines regarding the content and process of the IYE in order to assist UNEP, the World Tourism Organization and other concerned parties in the implementation of the programme;
- to help design the programme in such a way that public interest – e.g. in respect of ecological protection, economic equity, social justice and human rights – takes precedence over narrow and short-sighted industry interests;
- to change the name of the event to the "International Year of *Reviewing* Ecotourism" (IYRE), and to provide for the establishment of an independent commission on ecotourism to conduct a fundamental reassessment of ecotourism-related issues using the expertise of all concerned parties. As for the latter, we believe that the World Tourism Organization is not appropriate to oversee this commission since its primary goal is to promote the tourism industry, contradicting the need for broad-based and critical studies and analyses of tourism, including ecotourism.

While many NGOs have signed on to the above statement, there has been little response from Indigenous nations. This is not indicative of a break with the NGOs on strategy or focus, but rather reflects a different emphasis by Indigenous communities on both ecotourism and cultural tourism.

It also indicates that, up to now, Indigenous communities have had few

forums or opportunities for addressing issues associated with IYE in any systemic fashion. Many of the meetings in which Indigenous people are able to get together to discuss this issue are small Convention on Biological Diversity (CBD) or Commission on Sustainable Development (CSD) sidebar meetings. While these provide valuable networking opportunities, they do not allow the time – nor are they structured – for deeper exploration of the issues.

A further issue of far greater importance is that Indigenous communities are often ambivalent about ecotourism and may not agree with NGOs entirely, or may perceive that ecotourism coupled with cultural tourism offers a path to development that ensures minimal environmental protection and one in which they can still practise their culture.

Protection of land and resources, and protection of culture, are the most consistently voiced concerns of Indigenous people in all international and national forums. That their hopes could become a reality presupposes a very idyllic, idealized and integrated, primarily small-scale, development model that is often at odds with tourism models proposed by developers and state authorities. Ideally, this development model should also be tied to development of local political arrangements that support Indigenous self-determination.

Many states and Indigenous communities are currently on a collision course, as states pursue development of protected areas and biospheres as a way to meet their commitments under the Convention on Biodiversity and a way to act as portals to "nature experiences" for tourists. As tourist revenues wane in traditional destination resorts like Puerta Vallarta (Mexico), for example, a number of strategies have been devised to lure a new market and reinvigorate the traditional one. At Puerto Vallarta these include whale-watching and alligator-watching trips, visits to the Huichol villages in the Sierra Madre, and rainforest excursions. In the first wave of Puerto Vallarta's tourist development, Indigenous communities along the south of the Bahia de Bandera were relocated to make way for condos and resorts.

The community of Yelapa, an hour's boat ride from Puerta Vallarta, has long been a backpackers' destination. It now advertises itself as "Polynesia in Mexico". Every day four or five large tour boats visit its small bay. A proposal has been made to develop the village as a major destination including ecotourism excursions into the mountains and jungle with local guides. The impact of this development has been the fraying of the village's social fabric and local economy. Increased sales of illegal drugs, an influx of western consumer goods and culture, degradation of the local environment, a shift from the traditional diet to one based on inferior store-bought foods, nuclearization of local families and concomitant loss of authority by village elders, and the loss of local language are all attributable to the increase in tourist visits and the influx of cash into a traditional economy which had been based on exchange and subsistence.

Not everyone in Yelapa is against the increased development of tourism. Local restaurants have flourished, craftspeople and small producers have increased their market, and there has been some improvement of infrastructure (although not always with the best results, e.g. paving of paths with concrete has increased erosion in this community built on the side of a mountain). People also have larger and faster boats, making the outside world more accessible.

Such ambivalence about tourism at the local level needs to be addressed, and IYE provides an opportunity to do. Tourism development is not the only significant social and economic pressure affecting the people of Yelapa, who (like all Indigenous people in Mexico) are caught up in a period of immense transformation of the local polity brought about by state initiatives. However, tourism provides a very useful window into issues of transformation and local control.

The problems faced by people in Yelapa are faced by other Indigenous people all over the world – from the Kuna in Panama, to the Cree in James Bay, to the Bedouin of North Africa. The most germane questions are:

- What benefit will these people derive from IYE 2002? Will IYE only be a time to celebrate ecotourism as a triumph of progressive "green capitalism"?
- Will it provide an orgy of meetings for the tourism business alone?
- Will it result only in some shiny posters of palm trees and pristine beaches, or provide a serious forum in which issues of appropriate, culturally based and environmentally sustainable development of Indigenous communities are discussed?
- Can we address the issue of biosphere development and access to traditional lands and resources by Indigenous peoples?
- Will resourcing be available for Indigenous peoples to represent themselves on this issue?
- Will states commit themselves to entering into a frank and open discussion of national economic development strategies that will have undue effects upon Indigenous peoples?

IYE represents a great opportunity. However, it may easily be squandered to the detriment of all of our futures.

For more information about the Statement to the UN General Assembly and about some of the organizations mentioned here, see: www.itn.org, www.cwis.org, or www.iwinside.org.

Local community benefit systems at two nature-based tourism operations in South Africa

Anna Spenceley, Institute of Natural Resources, Private Bag X01, Scottsville, 3209, South Africa (Spenceleya@nu.ac.za)

Summary

Fundamentally different types of local community benefit systems have been established at two nature-based tourism operations in South Africa: Ngala Private Game Reserve and Rocktail Bay Lodge. One is funded through independent, externally sourced donations, the other through share dividends. Mechanisms governing benefits provision are described, as well as each system's impact on the nearby communities. Some community benefits (e.g. employment, entrepreneurial opportunities, resource use, support for traditional ceremonies) are not directly related to formal community benefit systems.

Resume

Deux systemes radicalement differents de production d'avantages pour les populations locales ont ete mis en place dans deux centres touristiques d'Afrique du Sud axes sur la nature : la reserve naturelle privee de Ngala et Rocktail Bay Lodge. L'un est finance par des dons d'organismes exterieurs independants, l'autre par les dividendes d'actions. L'article decrit les mecanismes qui produisent ces avantages, ainsi que l'impact de chaque systeme sur les populations alentours. Certains avantages pour la collectivite (par ex. l'emploi, les possibilites de creation d'entreprises, l'utilisation des ressources, le soutien aux ceremonies traditionnelles) n'ont pas de rapport direct avec les systemes economiques traditionnels.

Resumen

Se han establecido sistemas de beneficios para la comunidad radicalmente diferentes en dos operaciones de turismo-naturaleza de Sud Africa: Ngala Private Game Reserve y Rocktail Bay Lodge. Uno de ellos cuenta con el subsidio de donaciones externas e independientes y el otro de dividendos accionarios. El articulo describe los mecanismos que regulan la generacion de beneficios y el impacto de cada sistema sobre las comunidades cercanas. Algunos beneficios para la comunidad (como ser empleo, oportunidades laborales, utilizacion de recursos, apoyo para ceremonias tradicionales) no estan directamente relacionados con sistemas formales de beneficios para la comunidad.

Increasingly, commercial nature-based tourism operations in protected areas of Southern Africa are actively engaging neighbouring communities and distributing associated benefits to them. Community-based natural resource management and NGO operations that prioritize economic development of poor rural communities are increasingly complemented by private sector and profit-motivated operations incorporating community benefit systems.

Figure 1 shows the location of the two nature-based tourism operations in South Africa described in this article: Ngala Private Game Reserve (PGR) and Rocktail Bay Lodge.

Profiles of Ngala PGR and Rocktail Bay Lodge are presented in **Table 1**. The types of activities offered by the two lodges differ. However, they are both small, exclusive nature-based tourism operations. They have similar markets, operating companies and land tenure systems.

Ngala Private Game Reserve

Ngala PGR distributes benefits to local communities through an arm of Conservation Corporation Africa (CCA) dedicated to channelling international donor support to responsible community projects in rural Africa. The Africa Foundation (formerly the Rural Investment Fund) finances projects in the following way:

- Projects must be *initiated* by members of the community neighbouring Ngala PGR and must *benefit the community*;
- They must address *types of projects predetermined by the Africa Foundation*, such as small business development, cultural development, regional infrastructure, or capacity building and training;
- Proposers must show that projects are economically, socially and environmentally *sustainable*;
- Members of the *community* must *work in partnership with the Africa Foundation* and contribute to the process (e.g. by supplying labour or materials);
- A proposal is *reviewed* by an Africa Foundation regional manager and presented to the Foundation's Trustees;
- If the proposal is approved, the regional manager is allocated the budget and oversees project implementation.

Cash is not handed directly to the communities, as this has led to problems of embezzlement by community members in the past. Such losses are not feasible for an organization that must account to its donors and show how contributions have been used. Therefore, the current mechanism has been seen as the most effective way to ensure that donations are managed transparently.

Rocktail Bay Lodge

The local community neighbouring Rocktail Bay Lodge *holds shares* in both the lodge owning and lodge operating companies. Benefits are dependent upon tourism revenue and the proportional size of recipients' equity shares.

A schematic of the organization of Rocktail Bay is shown in **Figure 2**. Share proportions were designated by consultants working on behalf of Isivuno, a non-profit company formed as the trading arm of KwaZulu Conservation Trust, now KwaZulu-Natal Nature Conservation Service (KZNNCS), prior to Wilderness Safaris entering the organization as the private operator.

The community receives dividends from its shares in the *lodge owning* company on a quarterly basis from lease payments paid by Wilderness Safaris, and from the *lodge operating* company when operational profits are sufficient. The dividends are paid into a bank account operated by a Community Trust. The system for spending them is as follows:

- The Trust *considers options for projects* and may receive additional suggestions from individual community members;
- The Trust *consults* with the independent Rural Development Committee with respect to types of development projects needed in the community;
- Project options are taken to an open public community meeting, where the *whole community votes* on how the money should be spent.

The Trust is accountable to the rest of the community. This was illustrated recently when the community fired the entire Trust, whose members were spending the dividends without the whole community's agreement. A new Trust was subsequently elected.

Benefits directly accruing from the two systems

Community funds

Through the Africa Foundation, Ngala PGR provided funding totalling £33,200 for projects in the neighbouring community of Welverdiend be-

Figure 1
Location of Ngala PGR and Rocktail Bay Lodge

tween 1998 and 2000. The Community Trust for the Mqobela and Ngwanase villages neighbouring Rocktail Bay received £10,500 in cash between 1996 and 2000.

Although more money has been distributed by Ngala's benefit scheme than by Rocktail Bay's (and within a shorter period of time), it has been distributed over a considerably larger population. The population of Welverdiend is estimated at between 7000 and 10,000; the two communities by Rocktail Bay number less than 1600. Therefore, if financial benefits per head of population per year are considered, the members of Welverdiend community received *less* than those of the Mqobela and Ngwanase villages (around £1.18 vs. around £1.67). The benefit per head is minimal in each system. Considering the sums distributed by both lodges, it would appear more effective to fund community projects than to distribute the money among community members.

Neither community benefit system uses contracts between "donor" and "recipient", leaving these parties vulnerable to potential problems with auditing, transparency and corruption.

Infrastructure

Ngala's Africa Foundation funds have been used to pay for infrastructural additions to two schools in Welverdiend; dividends from Rocktail Bay have been used to pay for building improvements at two local schools. The communities around Rocktail Bay have also benefited from the purchase of materials to improve the poor quality roads linking the villages with the lodge and the nearest local town.

Education

Bursaries for private individuals have been provided by both benefit systems to finance academic and vocational training in a wide range of subjects. An interesting difference between the two systems is that students financed by Ngala's Africa Foundation are required to return to their community for up to two years after their training, in order to assist the community or give motivational talks. The Community Trust for Rocktail Bay does not require this of its financed students, and therefore does not optimize the benefits of its educational investments.

The Africa Foundation also emphasizes environmental and health education in the local community. It hosts donor funded Bush Schools and Conservation Lessons for pupils from local junior schools. These schemes are designed to fit in with local natural science school curricula. The Bush Schools entail a three-day, two-night programme, while the Conservation Lessons take place during one day. Health education, which has focused on HIV/AIDS awareness, has financed the writing, production and performance of an informative play by a group of youths from Welverdiend reflecting local issues and concerns. Recently, the Foundation also worked with a sports NGO to provide cricket training to the children of Welverdiend.

Business opportunities

A seed-credit fund facility within the Africa Foundation was used to facilitate the purchase of a vehicle for a taxi driver from Welverdiend, who is paid to transfer Ngala's staff to and from the lodge.

Further business development has occurred separately from the benefit systems (see below).

Benefits accruing from lodge operations which are not directly related to the community benefit systems

Employment

There is high local unemployment in the communities neighbouring each lodge operation. However, the two lodges differ with respect to recruitment policies directly affecting employment of people from local communities.

Ngala PGR staff required for bottom-level entry (e.g. housekeeping staff) are recruited through existing employees. Existing staff are informed that a new recruit is required, and are asked to spread news of the opening through their network of friends and relatives. Interested candidates contact the lodge manager. Those which are suitable are interviewed.

At Rocktail Bay the lodge manager approaches the community leader (Induna) of either Mqobela or Ngwanase regarding candidates. The Induna puts the names of interested people in a hat and draws a selection at random. The lodge manager interviews those chosen, and the most suitable person is selected.

The impact of the two systems on staff compliments within the lodges are very clear. At Rocktail Bay, 24 of the 29 staff are from either Mqobela or Ngwanase. Although over half the 97 employees at Ngala are from poor rural areas, only two are from Welverdiend.

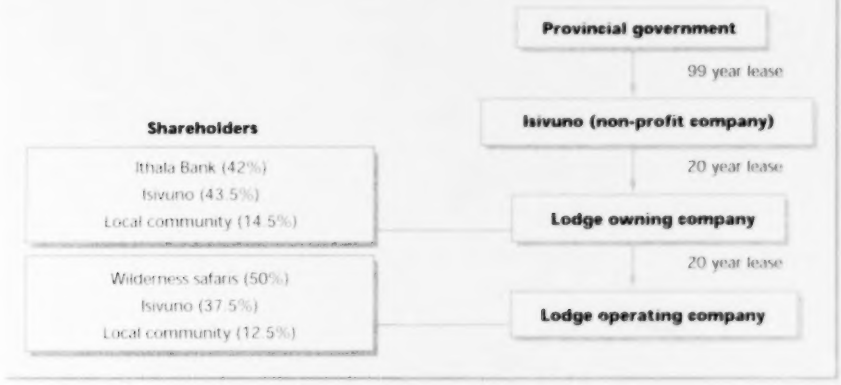
The recruitment strategy at Rocktail Bay is more equitable, since anyone interested in a job can theoretically be chosen for an interview, whereas at Ngala PGR only friends or family of current employees are likely to hear about openings. It should be noted that the recruitment system at Ngala PGR is not unusual within South Africa's safari lodge sector, and that it is used because it is easy to operate logistically. Frequently overlooked is the fact that the system has significant implications for distribution of wage and training benefits to small proportions of the rural poor. It also has critical impacts on the level of power held by certain families and groups within the staff and the wider community.

Business opportunities

Business and entrepreneurial activities in the communities neighbouring the two lodges have been encouraged most significantly at Rocktail Bay. In addition to support for a taxi service similar to that at Ngala, "hippo tours" have been introduced. These tours employ local community members to guide guests to local hippopotamus habitats. Previously considered a pest by villagers since they destroy crops and property, hippos are now tolerated since the tours generate a fixed monthly fee for the community, plus money per tourist if hippos are sighted.

Rocktail Bay also uses a community-based security service that has recently become part of a wider Community Policing Forum. This security service has proved very effective in curbing local crime. It is therefore beneficial to both tourists and

Figure 2
Organization of Rocktail Bay Lodge



members of local communities.

Local food and craftware are purchased on an *ad hoc* basis at Rocktail Bay, but there has been no strategy for building capacity or linkages within the communities in order to provide such goods. A local NGO employed to develop linkages between the lodge and the communities is now helping local people explore opportunities for a community garden and backpackers campsite.

Ngala PGR has donated waste food from the lodge to support a pig farmer in Welverdiend. Ngala is also investigating the potential to develop local craft-making skills and sell local products in the lodge curio shop, in cooperation with an existing capacity building NGO.

Land management and resource use

Since neither of the private operators discussed here owns or manages the property on which it operates, there is little potential to improve the availability to local communities of resources from within neighbouring protected areas, or to improve local community input into land management. However, staff at Ngala PGR have been working with the land managers from South African National Parks to promote involvement of local people in discussions of land management activities at formal meetings, and the sustainable utilization of natural resources such as wood from bush-clearing activities and water from dams. There appears to be a low level of subsistence and commercial poaching in the region of the reserve closest to the Welverdiend community.

Utilization of natural resources from the Maputaland Coastal Forest Reserve, in which Rocktail Bay is located, is controlled by the KZNNCS and not by Wilderness Safaris. Some customary use of resources from within the forest and the inter-tidal zone is currently permitted; a quota system to limit and control off-takes is under discussion.

Traditional cultural activities

At Ngala, the Shangaan staff receive supplements to their wages for performing traditional dances and songs for guests, dressed in traditional attire. A local tutor was employed to enhance the dancing and singing skills of staff who wanted to participate.

Meanwhile, Rocktail Bay uses externally sourced entertainment from a local Sangoma Dance Team, which performs traditional ceremonies and dances for visitors on request. Sangomas are traditional healers in Southern Africa who practise divination through ancestral spirits, complementing holistic health care through administration of herbal remedies. The principal runs a successful practice and training school, where he trains emerging Sangomas. Money earned from tourist performances has allowed him to take on financially disadvantaged students, and to speed up the rate of training by funding key ceremonies.

Interestingly, the Sangoma is aware of the danger of the performances becoming over-exploited through commercialization. He therefore wishes to limit the number of performances given throughout the year.

Benefits and their impacts

Sustainability of the benefit systems

The system of partial ownership at Rocktail Bay is more likely to be sustainable than the system used by the Africa Foundation at Ngala PGR. This is because the donor funding on which the Foundation relies is susceptible to donor interest and to the ability of the Foundation to attract funds. (Donor systems are clearly very attractive to the private sector since the community development activities financed *do not impact on profits* from tourism revenue, whereas providing additional stakeholders – i.e. the community – with a share in the company does.)

In addition, it is unlikely that Ngala PGR's benefit system would be transferred to a subsequent operator if Conservation Corporation Africa (CCA) were to pull out of the concession in the future since the benefits are not an intrinsic part of the lodge structure. Meanwhile, the benefit system at Rocktail Bay would be transferred to other private operators if Wilderness Safaris left. Although dividends from the lodge owning company are paid regularly to the community, those accruing from the lodge operating company depend upon profit. They relate to occupancy levels and prices charged guests. If the lodge is not profitable, the community does not benefit.

Level of control by local beneficiaries

In the case of Ngala PGR, it is the Africa Foundation board that ultimately determines whether or not community-initiated projects receive funding. Thus the level of control by local beneficiaries over types of benefits depends on their capacity and willingness to cooperate and contribute to the process with the Foundation, and to demonstrate a project's sustainability. Although the system incorporates important safeguards to minimize the possibility that there will be fraud on the community side, and that unfeasible projects do not receive financing, this means the community does not have the freedom to control and spend money intended for their use as they may wish.

Any member of the communities of Mqobela and Ngwanase has the opportunity to decide whether community proposed projects should be funded, and the community-elected Trust has been given direct control over their share dividends. Although this responsibility provides the community with the possibility to control their funds, they do not currently have the financial or business understanding to manage the monies transparently (despite accounting courses financed by the Trust).

In addition, there is an overexpectation of what the lodge dividends can provide for the community. For example, the Trust speaks of providing electricity and improving roads in the area, but the amount of money needed to finance such projects far exceeds what they are likely to receive from their dividends. Such infrastructural improvements would require government-level investment. The community currently does not have sufficient capacity or understanding to evaluate the sustainability of potential projects.

The importance of benefits not directly related to the benefit systems

Employment is perhaps the most critical impact of the lodges not directly related to the benefit systems. This issue is most clearly highlighted in the case of Rocktail Bay, where simply in monetary terms approximately *15 times* as much money was distributed by the lodge to the community through wages than through share dividends between 1996 and 2000 (£162,000 vs. £10,500). Moreover, interviews with the staff indicate that at least 34% of wages is spent directly within the community. They are used to support wider family members who are unemployed (on average, 8.7 people per staff member); to build houses; to pay school fees; and even to employ further community members. The possibility for any interested member of the community to obtain an interview at the lodge, regardless of the standing of friends or family, is also important in terms of equity of opportunity.

The presence of this lodge has therefore had a significant impact on the cohesion of a small community by reducing migration of the workforce out of the area. In addition, monies accruing from "hippo tours" has changed local perceptions of an animal previously considered a pest but now treated as a valued resource.

The importance of addressing benefits not directly related to benefit systems lies in examin-

ing the physical and tenable benefits that will be experienced by poor rural communities when applying any strategy. Whether the strategy is to generate financial interest from external donors to finance community development, or to provide communities with partial legal ownership of a commercial operation, it is critical to understand the implications for the livelihoods of the people concerned and ask what type of benefits are feasible in relation to their desires.

Whether provision of benefits to local communities is a public relations exercise, a protective measure, or a reflection of ethical responsibility, the attractiveness of community benefit systems to conservation authorities and to the private sector should not mask the importance of basic employment and training for the disadvantaged rural poor.

Conclusion

Many positive and constructive features of the operations at Ngala PGR and Rocktail Bay can be replicated in similarly orientated tourism enterprises. Although it may be contractually difficult for existing lodges to adapt their concession and management structure to incorporate equity for local communities, 'adding on' a donor funded benefit system, or adopting preferential employment and purchase policies for local people, are relatively straightforward to initiate.

It is hoped that this comparison will assist decision makers, conservation authorities, the private sector, and communities in determining which aspects of the benefit systems described are most appropriate to their circumstances, and that they will learn from the limitations of both systems.

Acknowledgements

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Table 1
Ngala PGR and Rocktail Bay Lodge

	Ngala PGR	Rocktail Bay
Tourism operation	Exclusive photographic game safaris	Exclusive beach lodge with diving, snorkelling, fishing
Tourism management	Lodge operated by Conservation Corporation Africa (one of 22 lodges operated in six African countries)	Lodge operated by Wilderness Safaris (one of 31 lodges operated in seven African countries)
Market	Luxury, predominately international guests	Luxury, predominately international guests
Rack rate	US$ 340-475 p/p/p/n sharing (season dependent)	US$ 127 p/p/p/n sharing
Capacity	21 chalets (42 beds)	10 chalets (20 beds)
Tenure	10-year concession from South African National Parks Trust (part of Worldwide Fund for Nature)	20-year concession from statutory conservation arm of KwaZulu-Natal Conservation Service (KZNNCS)
Land management	Undertaken by South African National Parks within Timbavati Private Nature Reserve, which is unfenced from neighbouring Kruger National Park	Undertaken by KZNNCS, as part of the Maputaland Coastal Forest Reserve and Greater St Lucia Wetland Park (World Heritage Site)

p/p/p/n = per person per night
Information correct at time of writing

Medirigiriya: a community-based ecotourism programme in Sri Lanka that integrates conservation and development

Chandra de Silva, President, Ecotourism Society of Sri Lanka (ESSL) and Sarath Kotagama, Vice President, ESSL and President, Field Ornithology Group of Sri Lanka (FOGSL), No. 3 Suripa Lane, Colombo 5, Sri Lanka

Summary

The Sri Lankan government promotes community based ecotourism as a conservation tool and a way to develop rural areas sustainably. The Medirigiriya community-based ecotourism programme is a local government community project integrating conservation with development. The Medirigiriya pilot programme described in this article was one of the country's first experimental sustainable tourist development programmes to receive government assistance.

Resume

Le gouvernement sri-lankais encourage l'ecotourisme local comme outil de sauvegarde de la nature et de soutien au developpement durable dans les zones rurales. Le programme Medirigiriya community-based ecotourism est un projet d'interet collectif elabore par des collectivites locales qui integre la preservation de la nature dans le developpement. Le programme pilote decrit dans cet article est l'un des premiers programmes experimentaux de tourisme compatible avec le developpement durable a beneficier d'une aide gouvernementale.

Resumen

El gobierno de Sri Lanka promueve un ecoturismo basado en la comunidad como herramienta de conservacion y como forma de desarrollar las zonas rurales sustentables. El Programa de Ecoturismo Basado en la Comunidad de Medirigirya es un proyecto de la comunidad gubernamental local que integra conservacion y desarrollo. El programa piloto de Medirigiriya explicado en este articulo fue uno de los primeros desarrollos experimentales de turismo sustentable en recibir ayuda del gobierno.

In Sri Lanka, both cultural and natural elements constitute the resource base for ecotourism development. The natural environment is known for its great scenic beauty and biodiversity. Sri Lanka is one of the world's 25 biodiversity hot spots, and there is very high endemism per unit area.[1]

When the Sri Lankan tourism industry began in the 1960s, tourist visits were mainly based on beach holidays. However, the industry has been criticized for the poor yield per visitor and for the environmental problems (both physical and social) evident on beaches and their environs, where hotels are concentrated. Thus, there is great interest in developing ecotourism. While beach tourism will remain the country's primary tourism segment, ecotourism could be an "add-on" feature for visitors. The Sri Lankan government has identified ecotourism, including community-based ecotourism, as a niche segment of the tourist industry.

Community based ecotourism is both a conservation strategy and a rural development tool, since ecotourism can stimulate economic activity in isolated rural areas. As in many other countries, scenic and cultural attractions are located in Sri Lanka's rural areas. Active participation in natural resource management by rural communities has therefore become mandatory. Conservationists understand that "the future of the earth's biological diversity is inextricably linked to improving the quality and security of life of the rural populations, so that they are not forced to deplete their resources to survive."[2] Biodiversity can only be preserved if rural communities are offered viable alternative methods for sustainable use of the resources on which they depend for their livelihood.

For the purposes of this article, ecotourism is defined as "responsible travel to natural and *cultural* areas that conserves the environment and sustains the well-being of local people." This definition was formulated by the Ecotourism Society of Sri Lanka (ESSL), based on the definition provided by The International Ecotourism Society (TIES) and expanded to include the cultural element due Sri Lanka's rich ancient cultural, historical and archaeological resource base.

The Programme for the Conservation and Management of Lesser Known and Scenic Sites

In 1997, the Tourist Board (with the Ministry of Provincial Councils and Local Government), supported by financial assistance from the President's Fund, initiated the Programme for the Conservation and Management of Lesser Known and Scenic Sites in Sri Lanka. The "lesser known" man made sites are archaeological, cultural, religious and historical; "scenic" sites include waterfalls, lakes, water bodies, forests and mountains. Sri Lanka's better known sites include the UNESCO World Heritage Sites,[3] where over visitation has exceeded carrying capacity, alarming archaeologists and environmentalists.

Objectives

The Programme's objectives include:

- developing ecotourism as a way to generate revenue for local government institutions while protecting nature and culture;
- providing opportunities for people to use their leisure more productively by visiting these sites;
- providing employment for youth in the area through ecotourism development;
- strengthening local authorities' capacity to be partners in ecotourism development.

Phases of implementation

To achieve these objectives, it was decided to implement the Programme in three phases:

- *Phase 1*: a survey of "lesser known and scenic sites" addressed to local government authorities. Of 309 local authorities in Sri Lanka, 120 responded. They listed 1059 sites.
- *Phase 2*: training programmes on conservation and management of resources for those who responded;
- *Phase 3*: extension of the Programme in the future:
  - collection of further information to prepare a directory of lesser known and scenic sites;
  - compiling, as a special project, of a photo album of sites in the North Western Province.

Initiation of pilot programmes

The Field Ornithology Group of Sri Lanka (FOGSL), an NGO invited as an observer, proposed establishing "Nature Parks and Bird Paradises" at selected sites on a pilot project basis based on the following theme:

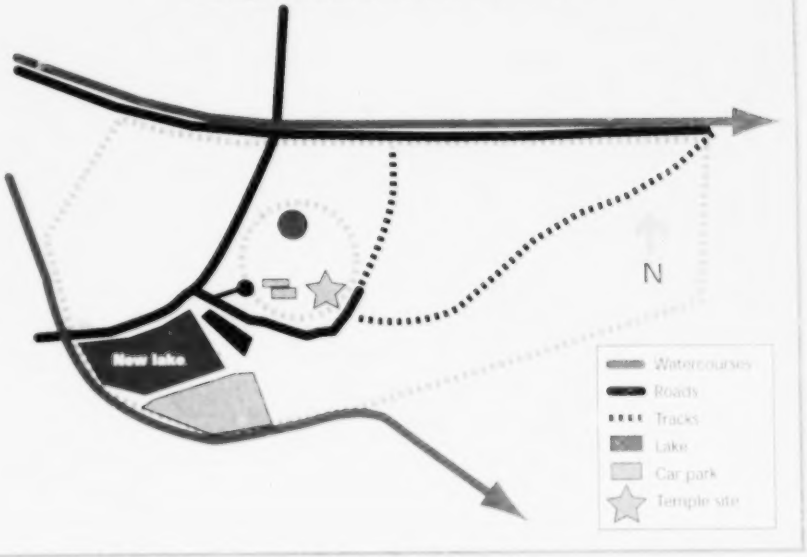
Development has altered the natural landscape considerably, affecting biodiversity in numerous ways. The most significant impact has been loss of habitat and change of landscape. Isolated amid these changes are small islands of "semi-natural" and/or abandoned areas, forming refuges for the remaining biodiversity.

Increased environmental awareness in the community, especially among children and younger generations, has resulted in a demand for conservation of these refuges, leading to a greater interest in the study and aesthetic enjoyment of nature. Lack of suitable locations developed to meet this need has been an impediment to people's involvement in achieving greater commitment to conservation.

These refuges have become good locations for birds, too. Birds are good indicators of the state of the environment and an attractive organism to capture the hearts of the younger generation.

The management of these refuges through community organizations, facilitated and guided by local government institutions, has been planned as a novel step to further the interest of environmental conservation. The Nature Parks and Bird Paradises will provide nature study opportunities for schools and the public, a location for nature appreciation through visitation, and ecological restoration for biodiversity conservation through community participation.

Figure 1
Medirigiriya Nature Park and Bird Paradise



Evaluation of proposals and site selection

Seventeen of the pilot proposals received were considered appropriate for development. The authorities were invited to a planning workshop conducted by FOGSL, the Programme's technical support arm. Three sites (Medirigiriya, Pavure-Kanda and Galnewa) were then selected to receive seed funding for pilot programmes from the 'President's Fund'.

The three sites chosen reflect different social settings.

- *Medirigiriya* is a seventh century Buddhist temple complex. As an Archaeological Reserve, it has State protection. The site is visited by large numbers of people for religious purposes throughout the year.
- *Pavure Kanda* is the location of a mountaintop Buddhist temple. The climb, the view, and a two-hour trip from the coast along a canal are the main attractions. A degraded forested area surrounds the temple premises.
- *Galnewa* is a forested area beside a reservoir. It is on a new route to a rock-engraved sculpture of the Buddha.

The National Steering Committee

The Nature Parks and Bird Paradises programme was implemented through a National Steering Committee chaired by the Additional Secretary, Ministry of Provincial Council and Local Government.

The other members of the committee were: Technical Support FOGSL, represented by the President and Vice President; a representative from the Sri Lanka Tourist Board; the Central Environmental Authority; the Department of Wildlife Conservation; the Forest Conservation Department; the Archaeological Department; and the Commissioner of Local Government.

Implementation body: the Community Ornithological Group (COG)

A community organization, called for convenience (and in relation to the Nature Park and Bird Paradises theme) the Community Ornithological Group, was created to implement the Programme. COG members included representatives from the community.

Implementation of the infrastructure component at each location was undertaken by the Pradeshiya Sabha, under the supervision of its technical officer.

Medirigiriya Pilot Programme: location and site description

Medirigiriya is located in the North Central Province. The main temple is referred to as a "Vatadage". Built on a rock accessible by granite steps and a loft archway, the stupa is 26 feet in diameter at its base. It is surrounded by three concentric circles of 68 graceful octagonal stone pillars.

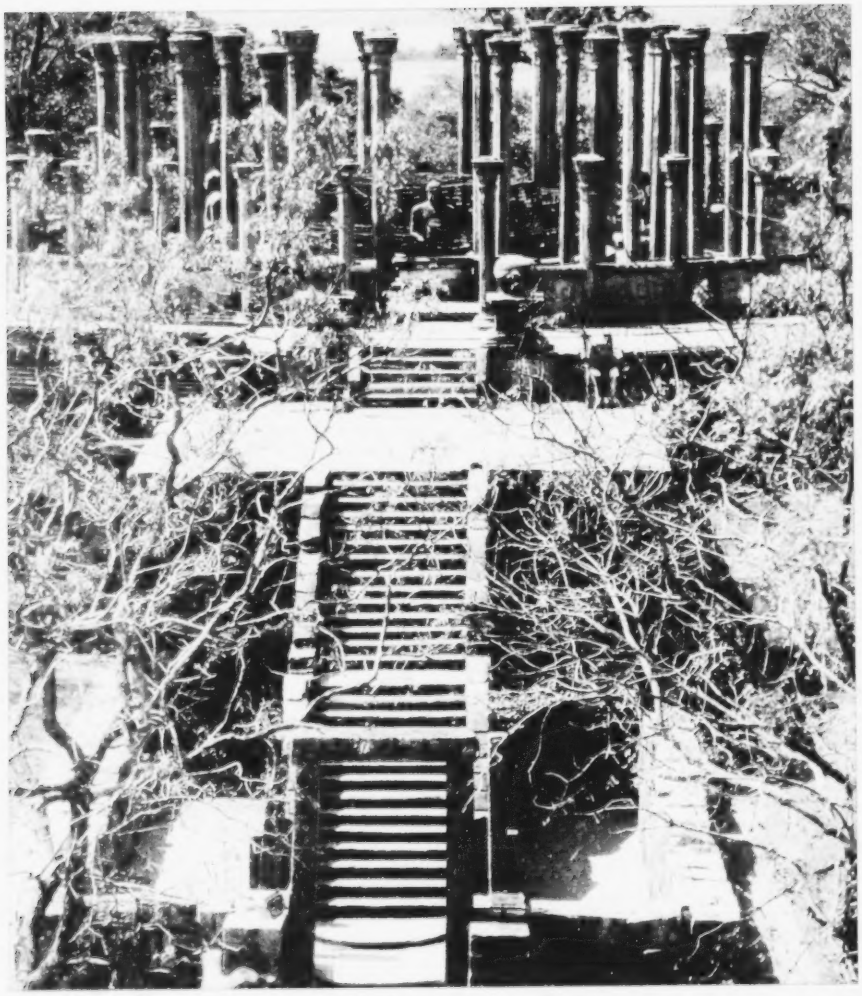
The Vatadage is complete except for a missing canopy and a few fallen stone pillars. The pillars are believed to have supported a canopy above the stupa. The Medirigiriya structure is the most complete Vatadage currently to be seen in Sri Lanka; the only other Vatadage is in the ancient city of Polonnaruwa. Around the main stupa at Medirigiriya are ruins linked to a major Buddhist temple and monastic centre. To protect the ruins and dispersed structures, an area of 240 hectares was declared an archaeological reserve. However, this area has been encroached upon and only 160 hectares of the reserve remain (including a degraded forest and 15 hectares of scrub and open land).

The secondary evergreen forest is characterized by a mixture of dry zone plants. The scrub contains thorn plants and *Randia* species. The forest, which has lost many tall trees through illegal logging, is now an island in the midst of paddy fields. Since the potential for ecotourism and rural development was recognized, local people have come forward to protect and develop this area.

The project area is surrounded by five villages with a population of around 9500. They have par-

Table 1
Progress on targeted infrastructure activities at Medirigiriya

Activity	Achievement	Comments
Reforestation of 5 ha	Completed area increased to 10 ha	Entire programme carried out with complete community participation, in addition to providing opportunities for low-income people. The community also participated in three community self-help (*Shramadana*) tree planting programmes.
Provision of drinking water facilities	Completed	Many families in the vicinity benefit from these facilities.
Provision of toilet facilities	Completed	
Construction of vehicle parking	Completed	This facility has provided the *Pradeshiya Sabaha* with a steady income, which will be used for development work in the area. Electricity provision (not targeted previously) was paid for out of this income.
Construction of bathing spots	Work begun	
Construction of restaurant and visitor centre	Plans approved	Construction planned for 2001.
Construction of structures for sales outlets	Plans approved	Construction to take place in 2001.



The Vatadage at Medirigiriya

ticipated in the pilot programme in a number of ways, as described below.

Aim and objectives of the programme

The programme's aim is to balance conservation of the site's archaeological, historical, religious and wildlife resources with recreational and ecotourism development for the welfare of the local community. To achieve this aim, the following objectives have been formulated:

- to protect the integrity of the archaeological site and emphasize its religious importance;
- to conserve wildlife, and to demonstrate the value of conservation through education and site interpretation;
- to develop, promote and manage the site for visitors while preserving facilities for religious activities;
- to give visitors the opportunity to enjoy and learn by laying and maintaining trails through scrub and forest and by means of an interpretation programme;
- to develop an environmental education programme demonstrating the value of conservation through education and site interpretation;
- to provide facilities for local experts and students to undertake research projects.

Achieving the programme's objectives

To achieve the objectives of the programme, it was decided to utilize seed money for selected infrastructure targets (Table 1). These targets were:

Reforestation

Reforestation of identified land with indigenous trees was to be undertaken using a participatory approach. Twenty poor families eligible for food aid and *Samurdi* (a government poverty alleviation programme) were to be selected. These families would be provided with all technical and material assistance for planting trees, and their care and maintenance, for five years. Remuneration would be paid.

One-half hectare was to be planted as an arboretum with many rare and threatened plants, to be used for education and as a mini botanical garden.

Table 2
Experimental operation of vehicle parking (May-June 2000)

Vehicle type	Charge per vehicle (Rs.)	Number of vehicles
Bicycle	3	325.1056
Hand tractor	10	243.355
Motor cycle	5	162.314
Bus/van/car	20	113.273

Drinking water facilities

These facilities would also pipe water to persons living near the site.

Protective vehicle parking

Construction and operation of a vehicle parking facility, with necessary guarantees for protection, would enable revenue collection by the Pradashiya Sabha (Table 2).

Bathing spots

For those who wished to bathe in the lake or canal following their visit to the site and prior to lunch, it was decided to establish two bathing spots to reduce impacts on the canal embankment and the lake's fringe vegetation.

Visitor and restaurant centre

To provide adequate information and create an interactive educational opportunity, a visitor centre presenting exhibits and other printed material was planned. An auditorium and restaurant were to be included.

Small product sales centres

These facilities would give entrepreneurs an opportunity to sell their products (e.g. artefacts and ethnic food) to visitors. The proposed structures would be designed to rectify some of the disorganized nature of such ventures and enable authorities to monitor the quality of products, reduce the potential environmental impacts of haphazard structures and organize systematic waste disposal.

Programme implementation

The pilot programme began to be implemented in December 1999. The first community meeting was held on 16 December 1999. Over 60 village representatives and officers participated, including representatives from 17 existing community organizations. FOGSL representatives explained the project's background and introduced the concept of "Community Ornithological Groups", explaining how they would work with the *Pradeshiya Sabha*.

A seven-member COG was chosen to implement the programme components and plan for future activities under the guidance of the Chairman of the *Pradeshiya Sabha*. The seven-member project implementation team consisted of three members from the *Pradeshiya Sabha* and four from the community, linking the elected representatives with the community in participatory management of the project. Technical input was provided by FOGSL; Mr Rahula Perera acted as consultant.

FOGSL, through its Bird Life International affiliation, invited two experts from the Royal Society for the Protection of Birds in the UK. These experts conducted a one-week training programme for the community and the implementation team on preparing management plans and the basics of bird park management. This suc-

cessful exercise has become the basis for added activities planned in order to make Medirigiriya a nature park for visitors in addition to its archaeological interest. These activities will be undertaken in 2001.

Programme status

At the end of 2000, almost 90% of the targeted work had been achieved. Table 1 shows progress on the targeted infrastructure activities.

Experimental operation of vehicle parking

Experimental operation of vehicle parking took place during the full moon days of May 2000 and the Poson full-moon week (15–18 June). The income generated over six days was Rs. 42,923 (Table 2).

Other activities

In addition to the achievements already mentioned, educational activities linked to use of the Nature Park have been carried out. Nature clubs have been established in 19 area schools. Community awareness workshops have been conducted in five villages.

Project benefits and lessons learned

The Medirigiriya pilot programme is one of the first experimental sustainable tourist development programmes assisted by the Sri Lankan government. This is also the first time a five-party governmental partnership – the Ministry of Provincial Councils and Local Government, a local government authority, the community, the Sri Lankan Tourist Board and an NGO – has collaborated to promote a novel participatory approach linking tourism and conservation for the welfare of the local community.

From the lessons learnt, it is clear that the programme's initial component has been successfully completed. The programme was undertaken under many constraints, primarily lack of full-time staff except at the local government level. The implementation committee is happy to note that its contribution has yielded results. Mutual respect among the implementers and available local expertise, with some foreign assistance (the Royal Society for the Protection of Birds), has demonstrated that when given the opportunity and a helping hand the community can respond positively and productively.

Parallel to these activities, an island-wide publicity campaign was conducted to identify a national logo for the Nature Parks and Bird Paradises programme.

Conclusion

Medirigiriya is located near three World Heritage Sites: the ancient cities of Anuradhapura (circa fifth century BC); Polonnaruwa, Sri Lanka's medieval capital (tenth century AD); and the Sigiriya rock citadel, celebrated for its frescoes and water gardens (fifth century AD).[4]

In view of Medirigiriya's religious significance, there is constant flow of visitors to the site every day. The number of visitors increases on full moon days. The greatest number of visitors come during the week of the full moon in June. It is estimated that there are over 100,000 of them in June, with an average of some 2000 to 3000 each month.

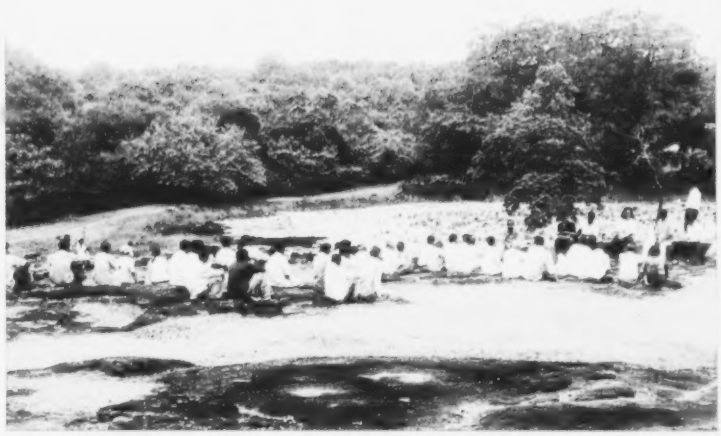
The number of foreign visitors is estimated at 25,000 per year. Traditional package tours organized by tour operators do not include Medirigiriya, as it is a "lesser known site".

With the construction of vehicle parking and other infrastructure facilities, as well as retailing facilities, the number of foreign visitors will increase. Retailing could become a subsidiary attraction and form a secondary market for the customer base, with visits to the three nearby World Heritage Sites representing an "add-on" feature to a beach holiday.

Reforestation of eight hectares saved from loggers, together with the existing natural forest, will help conserve biodiversity in an area of around 175 hectares. This resource base, as a bird and wildlife park for nature tours, could be managed by the community – which would reap the economic benefits while ensuring conservation.

Funds generated by vehicle parking will go to a general fund maintained by the *Pradeshiya Sabha*. They will be used to pay parking and maintenance staff, who are villagers. Shops will be rented only to villagers (men and women) for selling artefacts, forest products (including fruits and honey) and organic food made by villagers. This will stimulate economic growth in the village. Rent will be paid to the *Pradeshiya Sabha*. Along with income derived from vehicle parking, these funds will be used to improve the infrastructure of the Medirigiriya complex and of neighbouring villages. By running their own businesses, villagers will be motivated to become successful, in contrast to running them on a cooperative basis.

It is also proposed to train village youth as interpreters for bird and nature tours, creating new employment opportunities.



Community meeting at the Vatadage

The local community has been directly involved in the project from the beginning of the planning process. It has actively participated in infrastructure development, particularly reforestation. This has created a sense of belonging and of identification with the project.

When the project is completed, the pilot community will have employment opportunities in various areas (e.g. vehicle parking, the visitor centre, auditorium and restaurant). Self-employment opportunities will also be available for bird and nature programme interpreters. Entrepreneurs will have opportunities to run shops with goods produced in the village – thus *empowering the community* through increased economic activity.

Medirigiriya is an example of conservation preceding tourism planning, as marketing of the product will only begin when the project is complete, ensuring conservation of the archaeological and nature resource base. Conservation and rural culture will be integrated with the economic interests of the community.

Notes

1. The term "biodiversity hot spots" is used by the International Union for the Conservation of Nature (IUCN), Conservation International and other conservation organizations to designate areas with very high biodiversity. Endemism is the confinement of plant or animal distributions to a particular continent, country or natural region.
2. Boo, Elizabeth (1990). *Ecotourism: The Potentials and Pitfalls*. Worldwide Fund for Nature. Vol. 1, p. 3.
3. See, for example, the article on page 10 by Megan Epler Wood.
4. "World Heritage Sites are the planet's outstanding attractions, the greatest monuments from the past. They are contemporary tourism magnets and national icons that continue to influence present values." See *Cultural Tourism – Tourism at World Heritage Sites. The Site Manager's Handbook*. ICOMOS International Specialised Committee on Cultural Tourism 10th General Assembly.
5. Local government institutions are political units at the local level consisting of representatives elected through an electoral process. *Pradeshiya Sabhas* are the grass root units of elected rural community representatives.
6. The following sites in Sri Lanka have been inscribed on the World Heritage List: the Sacred City of Anuradhapura (1982), the Ancient City of Polonnaruwa (1982), the Ancient City of Sigiriya (1982), the Sinharaja Forest Reserve (1988), the Sacred City of Kandy (1988), the Old Town of Galle and its Fortifications (1988) and the Golden Temple of Dambulla (1991). Sinharaja is also a UNESCO Biosphere Reserve; its major ecosystem type is tropical humid forests. ◆

Capacitación en servicios independiza comunidad local: El caso del Albergue Ecológico Chalalán-Parque Nacional Madidi, Bolivia

Jazmín Caballero García, America Tours SRL., Av. 16 de Julio (El Prado) 1490 Edificio Avenida PB No. 9, La Paz, Bolivia (jmiranda@cotas.entelnet.bo)
David G. Ricalde, Director, Ciencia Asociacion Peru Verd, Jr. Ricardo Palma J-1, Urb. Santa Monica, Cusco, Peru (dricalde@hotmail.com)

Summary

The authors present an update on the evolution of the Chalalan Ecolodge, a community-based project in the natural integrated management area of the Madidi National Park in the Bolivian Amazon. The initial capacity-building phase (1997-1998) was essential to consolidate the ecolodge project as a new tourism destination and to ensure community independence in decision-making. The authors consider this project as a model for ecotourism development in Bolivia and in the Amazon.

Resumé

Les auteurs font le point sur l'évolution du village d'écotourisme Chalalan, projet communautaire mis en oeuvre dans la zone naturelle de gestion integree du parc national Madidi en Amazonie bolivienne. La premiere phase de developpement des capacites (1997-1998) etait cruciale pour faire de Chalalan une nouvelle destination touristique et assurer l'independance de la communaute dans le processus de decision de ce projet autogere. Selon les auteurs, ce projet est un bon exemple de developpement de l'ecotourisme en Bolivie et en Amazonie.

Resumen

Los autores presentan una actualizacion sobre la evolucion del Albergue Ecologico Chalalan, un proyecto de comunidad en el area natural de manejo integrado del Parque Nacional Madidi-Amazonia Boliviana. La fase inicial de capacitacion (1997-98) fue fundamental para consolidar el Albergue Ecologico Chalalan (Madidi) como nuevo destino turistico y asegurar la independencia de la comunidad en la toma de decisiones en el proyecto autogestionario de desarrollo sostenible. Los autores consideran este proyecto como un modelo de desarrollo ecoturistico en Bolivia y la Amazonia.

Antecedentes

Entre los años 1970 y mediados de 1980, miembros de la Comunidad de San José de Uchupiamonas (SJU), trabajaron como guías, portadores y motoristas para tours de caza y pesca en bosques amazonicos de esta región con algunos operadores turísticos de La Paz-Bolivia. Esta comunidad de 650 habitantes de origen Quechua-Tacana esta ubicada en la Amazonia Boliviana al noroeste del Departamento de La Paz en la provincia Iturralde y se dedica a la agricultura de subsistencia y anteriormente a la tala selectiva de maderas valiosas. Al empezar los años noventa, estos pobladores decidieron desarrollar turismo en Chalalan, un atractivo lago a una hora y media de recorrido en bote de la Comunidad, sobre el Rio Tuichi, en esa epoca, especies maderables como la caoba (*Swietenia macrophyla*), cedro (*Cedrella* sp.) y otras maderas valiosas fueron prácticamente extinguidas de la zona y además aparecieron nuevas legislaciones ambientales que prohibían la tala de maderas, la quema de bosques y la caza de animales en el país. Esta nueva disposición motivo que estos pobladores buscaran otras formas de vida y algun tipo de financiamiento. En 1994 logran concretar una alianza de cooperación con Conservación Internacional (CI), dándose inicio en 1995 al *Proyecto de Desarrollo Sostenible y Ecoturismo para San José de Uchupiamonas*. Este proyecto fue financiado por el Banco Interamericano de Desarrollo (BID), incluyendo desarrollo turístico, empresas anexas a este, además de agricultura sostenible y fortalecimiento interinstitucional. Este Proyecto después de concluido debe pasar a manos de la administración de la comunidad San José de Uchupiamonas.

En 1995, mientras se concretaba este acuerdo, el gobierno boliviano creó el *Parque Nacional y Area Natural de Manejo Integrado Madidi* que comprende 1.8 millones de hectareas de extension, así la comunidad de San José de Uchupiamonas y el mismo Lago Chalalan quedaron dentro del Área Natural de Manejo Integrado. Es importante remarcar que desde 1995, este Parque Nacional y su area natural de manejo integrada contienen oficialmente la mayor biodiversidad conocida en el Planeta, superando a Manu (Perú) que hasta ese entonces era conocido como el mas rico en especies a nivel mundial. Los bosques amazónicos del Lago Chalalan son casi parecidos a otros como es el caso de Manu y Tambopata (Perú), ambos destinos populares para turistas internacionales. Excepto por las espectaculares nutrias gigantes (*Pteronura brasiliensis*) y los lagos en herradura (ex. bon. *Lukes*) característicos de estas selvas, los visitantes al Rio Tuichi y el Lago Chalalan pueden observar atracciones de fauna y paisajes similares a estos otros destinos amazonicos.

La puerta de entrada al Rio Tuichi y Chalalan es Rurrenabaque, localidad que alcanzo estos ultimos años (desde 1993) un notable crecimiento turístico en la Amazonia boliviana. Anteriormente, entre 1980-1993, el Rio Tuichi fue mas popular para turistas conocidos como *backpackers* quienes hacían caminatas y campamentos en las selvas entre el medio y bajo Tuichi y sus tributarios (G. Mamani, comunicacion personal, 1995). Estos tours que podrían considerarse esporadicos incluso ofrecían rutinas de cacería de animales salvajes que habitan esta zona siendo la carne servida como parte de este atractivo. También se dio el caso que llegaron grupos exclusivos de turistas organizados (i.e., *Club Med*) hacia este bosque tropical trasportados desde la ciudad de La Paz en avionetas pequeñas hasta el Lago Santa Rosa, lago vecino a Chalalan (R. Córdova, comunicación personal, 1996). El boom turístico que se dio a mediados de los años noventa, obligo a varios de los operadores de Rurrenabaque al levantamiento de campamentos en el bajo Tuichi para alojar a los turistas. De esta pequeña ciudad una gran mayoría de turistas se dirigían hacia las sabanas del Beni (muy próximas), mientras una minoría creciente compraba tours para llegar a los bosques del Tuichi. Esta experiencia que se vivía en la región, llevo a considerar a los habitantes de San José de Uchu-

pianmonas al turismo como una opcion de vida mas rentable.

Despues de ser concretada la alianza sobre el Proyecto de Desarrollo Sostenible y Ecoturismo para San Jose de Uchupiamonas, se realizo la capacitacion para los pobladores locales sobre temas que tenian relacion con guiaza, construcciones, sanidad, monitoreo de fauna e Ingles; a pesar de este esfuerzo, no existia todavia la infraestructura ni la capacitacion necesarias para la atencion a los turistas, aunque tambien los servicios del mismo ya estaban siendo promocionados de antemano internacionalmente en el mercado del turismo, como si fuera un destino similar al de Manu, Peru (ver *Lonely Planet* Bolivia, 1996). Posteriormente por varios problemas entre el banco Intetamericano de Desarrollo, Conservacion Internacional y la Comunidad de San Jose de Uchupiamonas (BID-CI-SJU) se intentaria atraer solo a turistas de bajo expendio monetario (US$15-35 por dia), en vez de atraer aquellos que podian pagar mucho mas en el Albergue, como se habia proyectado inicialmente.

La meta establecida por alcanzar para el Albergue Ecologico Chalalan (AE Chalalan) a tiempo de su conclusion, tendria una capacidad de poder acoger a un numero de 24 turistas, con una infraestructura comprendida por un comedor, cocina, sala de interpretacion ambiental, 4 duchas y 4 servicios higienicos compartidos, oficina de recepcion y alojamiento para el personal.

Entre los problemas presentados dentro de la Alianza, antes que el grupo de consultores retome el curso del Proyecto, podriamos identificar los siguientes:

- Insuficiente capacitacion y experiencia del personal para desarollar el Albergue.
- Algunos de los objetivos del Proyecto no estaban claros tanto para la comunidad como para el financiador.
- No habia un control para evaluar y hacer el seguimiento de los trabajos realizados.
- Existia una tensa relacion interinstitucional con la Comunidad, que no facilitaba el cumplimiento de las objetivos y metas.
- El beneficiario no estaba preparado para asumir responsabilidades, requiriendo de una mayor capacitacion.
- Practicamente todos los componentes del Proyecto estaban casi paralizados por los constantes reformulaciones de cronogramas y presupuestos (i.e., agricultura sostemible).
- El donante consideraba al proyecto economicamente insostenible y fuera del contexto de sus objetivos.
- Habia retrasos en los desembolsos por parte del financiador (BID) que a su vez reclamaba por el cumplimiento de las metas cronogramadas del Proyecto.
- El financiador observaba la falta de contraparte economica por parte del beneficiario, motivo de desacuerdo y confusion entre los componentes del Proyecto.
- Asi mismo la comunidad estaba en espera de ver resultados y algunos lideres tenian dudas con respecto al exito final del Proyecto.
- La comunidad se quejaba sobre algunos cronogramas del trabajo que segun ellos eran una amenaza para su forma de vida y costumbres.

Tabla 1
Numero de inscritos para la capacitación intensiva en servicios turisticos

Entre 1997-98 se capacitaron, mediante cursos a 45 varones y 23 mujeres sumando un total de 68 personas (ver Tabla 2). Este numero representa un 19 % de pobladores de la comunidad, cuyas edades fluctuaban entre 16 a 38 anos de edad. No fue facil atraer mas mujeres a la capacitacion debido primariamente a su falta de confidencia por su muy bajo grado de educacion. Sin embargo la asistencia fue notable, pues incluso ellas no dejaron otros beneficios como los varones que evitaban otras cosas algunos intentaron que se les pagara por asistir a los cursos de entrenamiento mientras que las mujeres mostraron un interes muy genuino.

Curso	Varones	Mujeres	Concluyeron
Administración Básica y Mercadeo	17	3	20
Alimentos y Bebidas	2	20	23
Historia Natural, Guianza y Monitoreo de Fauna Silvestre	26	–	26
Inglés básico*			
Emergencias y primeros auxilios*			

(*) Los participantes en inglés básico, emergencias y primeros auxilios eran algunos de los estudiantes de los otros cursos.

Tabla 2
Sobre los cursos, metodologia y la duración de cada curso

A continuacion se describen los cursos para la capacitación intensiva:

Cursos	Metodologia	Duracion
Administracion Basica	Cursos teoricos que luego fueron aplicados para diseñar de lo que finalmente seria el manejo administrativo del Albergue Ecologico Chalalan, ademas de las otras empresas o en el desarrollo institucional en la comunidad.	30 dias
Mercadeo y Ventas	Cursos teoricos, que fueron aplicados en la oficina de ventas de Rurrenabaque. Ademas se diseñaron los logotipos que posteriormente identificarian el producto AE Chalalan en el mercado. Esta seleccion se hizo con participacion de la comunidad.	30 dias
Alimentos y Bebidas	Se implementa una cocina con todos los tensillos necesarios para un hospedaje en la categoria de tres estrellas. Ademas se diseñan los menus para la atencion de turistas internacionales. Se estructuran costos. Se capacita para el personal de comedor y bar. Las clases son teoricas y mayormente practicas.	40 dias
Historia Natural y Guianza	Clases teoricas y practicas simuladas para paseos diseñados para turistas internacionales. En este caso, mas que abundar en detalles especificos sobre temas (e.g., aves, plantas, insectos, y otros temas especificos), se les dio una base de conocimientos acerca de lo que es un bosque tropical, su estructura, su funcionamiento, sus caracteristicas, su relacion con las especies que habitan en ese medio. El objeto del consultor a cargo fue lograr que los aprendices lleguen a ser mejores interpretes y analistas de lo que observan y no repetir aspectos de memoria o finalmente ser solamente "apuntadores" de atractivos.	120 dias
Monitoreo de Fauna Silvestre	Clases teoricas y practicas de campo. Se capacito a los guias sobre como estimar la abundancia relativa de especies en el sistema de senderos del AE Chalalan, tambien sobre como elaborar reportes, implementar labores de monitoreo en el tiempo. El interes del proyecto fue entrenar a locales para realizar labores de patrullaje en los territorios reclamados por la comunidad que esporadicamente eran invadidos por cazadores y madereros ilegales. Esta capacitacion se hizo extensiva al cuerpo de guarda parques del Parque Nacional Madidi.	30 dias
Ingles Basico	Clases teoricas y practicas. Como segunda lengua para los aprendices de guias y el personal del albergue y ventas. Se conto con voluntarios y turistas que se alojarian por largos periodos en el AE Chalalan quienes tambien dieron clases diarias.	180 dias
Emergencias y Primeros Auxilios	Clases teoricas y practicas. La meta de esta capacitacion fue preparar al personal del AE Chalalan para cualquier emergencia o eventualidad en caso de accidentes o evacuación de victimas hasta Rurrenabaque. Participaron tambien guarda parques del Parque Nacional Madidi y del Reserva de la Biosfera y territorio Indigena.	20 dias

Todo este panorama afecto el trabajo de las diferentes partes involucradas en el Proyecto, especialmente en la relacion comunidad-ejecutor. Ademas que se enfrentaba con la posibilidad de que el financiador recortara fondos o incluso considerara cerrar el proyecto como una medida extrema, por la amenaza de su insostenibilidad economica hacia el año 1997 (J. Vieira, comunicacion personal, 1997; C.Wedekull, comunicacion personal, 1998).

En el año 1997, CI y el BID contratan un grupo de 6 consultores especialistas en administracion, ecoturismo, conservacion – vida silvestre, construcciones, alimentos-bebidas, mercadeo y empresas. Conformandose de esta manera el equipo de campo para trabajar exclusivamente con la comunidad de San Jose de Uchupiamonas para desarrollar el componente relacionado al turismo para beneficiar a esta localidad. Este equipo inicio sus labores en lo que en practica seria el relanzamiento del desarrollo del AE Chalalan.

Los consultores en las areas de administracion, ecoturismo y conservacion recomendaron aplicar una estrategia diferente a las otras anteriormente implementadas, buscando una capacitacion mas solida de los pobladores de San Jose de Uchupiamonas en los cursos a ser dictados, siendo su objetivo general: Capacitar recursos humanos en el

campo del Ecoturismo en el mas breve plazo sobre administracion basica, alimentos y bebidas, ventas, guianza e interpretacion ambiental, a fin de consolidar el funcionamiento del AE Chalalan, buscando:

- Prestar buenos servicios tanto para turistas nacionales como extranjeros.
- Promover la participación de todos los habitantes oriundos, varones y mujeres de la esta Comunidad, interesados en prestar servicios en este Albergue.
- Mejorar la capacidad en la toma de decisiones, velando la autonomia de la gestion futura de la Comunidad como parte de su desarrollo sostenible.
- Incrementar el flujo de turistas al Albergue Ecologico Chalalan.

Para alcanzar el exito de este objetivo se organizaron cursos teoricos y practicos a ser desarrollados en cuatro fases.

Primera Fase (1997)

Durante las 3 primeras semanas, se oriento a los pobladores de SJU sobre la naturaleza de la capacitacion intensiva, mediante:

a. Visitas a todos los hogares de SJU.
b. Entrevistas con varones o mujeres jefes de familia.
c. Reuniones con el Club de Madres.
d. Reuniones con los líderes y autoridades.
e. Reuniones con otros responsables de otros componentes del proyecto de agricultura sostenible, para coordinar trabajos.
f. Entrevista con los interesados.

Los consultores especializados en administracion y conservacion explicaron de modo informal y formal sobre otros temas como:

a. El funcionamiento de albergues ecoturisticos similares en bosques tropicales y areas protegidas, como en Manu y Tambopata (Peru), Noel Kempff (Bolivia) y Monte Verde (Costa Rica).
b. Beneficios y ventajas del ecoturismo en favor de las comunidades nativas.
c. El Ecoturismo en las tendencias actuales y la conservacion de la naturaleza, biodiversidad y desarrollo sostenible como posibilidades futuras para SJU.

Cerrando esta primera fase con una explicacion general a cerca de la curricula de los cursos a dictarse, ademas de la metodologia, cronogramas, evaluaciones prácticas y teoricas.

Segunda Fase (1997)

Como producto del trabajo sistematico de dos consultores con experiencia, el numero de inscritos sobrepaso las expectativas previstas por la coordinacion del proyecto (ver **Tablas 1** y 2). Se tuvieron a 70 inscritos entre varones y mujeres de diferentes edades para los cursos antes mencionados, esto colaboro para que tambien existiera mas interes en capacitarse en mercadeo, aspecto a cargo de un tercer consultor.

Tercera Fase (1997-1998)

Los mejores alumnos del grupo de aprendices en los diferentes cursos fueron premiados para continuar su capacitacion en otros establecimientos de hospedaje y visitar otros lugares. Se ofrecieron aproximadamente 200 horas de practicas a diferentes niveles. Por ejemplo, recien para el ano 2001, dos socios del albergue visitaron un establecimiento turistico en Tambopata (Peru) para capacitarse durante dos semanas en tecnicas de guianza.

Cuarta Fase (1998)

En esta fase (1998), un 85% de los servicios del AE Chalalan estan implementados para atender a turistas nacionales e internacionales capaces de pagar US$ 50 /dia.

Se organizaron cuatro grupos de personal de aprendices para trabajar en turnos en el AE Chalalan como personal de servicios y administracion, cada grupo deberia trabajar por tres meses o cuatro por ano y con un periodo de descanso cada 15 dias.

A la vez los aprendices-practicantes seleccionados son remunerados con los mismos ingresos que el albergue empieza a percibir por concepto de servicios a turistas.

Estos grupos estaban conformados por:

- Un administrador
- Un encargado de ventas (Rurrenabaque)
- Una cocinera
- Una ayudante de cocina
- Un lavaplatos
- Una mesera
- Una mucama
- Dos guias residentes
- Un encargado de mantenimiento
- Una encargada de compras (Rurrenabaque)

En Diciembre de 1998 concluyen los contratos de la mayoria de los consultores de campo, por esta fecha el AE Chalalan ya habia recibido 182 turistas ese ano. Para el ano 2000, estos equipos entrenados recibieron mas de 815 turistas internacionales que pagan por 4 dias /3 noches existiendo proyecciones de sobre pasar este numero para el 2001 (J. Caballero, observacion personal, 2001). Esto quiere decir que el AE Chalalan capta aproximadamente un 10% del turismo que llega hacia Rurrenabaque y el Rio Tuichi, cifra que demuestra que en cuanto a ocupabilidad este albergue ha incrementado sus ventas en mas 450%, cumpliendose otra de las proyecciones debido a la capacitacion del personal llevada a cabo entre 1997-98.

Conclusiones

La capacitacion intensiva llego al 20% de los habitantes de SJU y materializo las aspiraciones de los pobladores de quedarse con un proyecto consolidado. Asimismo, los beneficiarios tomaron confianza en el exito del proyecto en base a la experiencia propia. Esta fue la primera señal que estos podian independizarse tanto del ente ejecutor como el financiero y buscar el camino de la sostenibilidad del componente de desarrollo turistico y considerar hacer lo mismo con los otros componentes del proyecto de desarrollo sostenible de modo integral que estaban paralizados.

Esta capacitacion intensiva, entre 1997-98, puede haber sido lo mas exitoso del proyecto, pues es el cimiento que hoy facilita el desempeño de Chalalan como producto con buenas oportunidades en el mercado y ha renacido la confianza de los beneficiarios por el proyecto. Esta capacitacion ha sido un medio para potenciar los niveles de toma de decisiones por los propios comuneros de SJU, por lo tanto ha cumplido sus objetivos. Al presente el albergue cuenta con recursos humanos con experiencia que luego de su capacitacion fundamental tambien ha facilitado el rol de CI como ejecutor entre 1998-2001 y eliminado la presion del financiador por resultados concretos. Entre 1999-2000 se implementaron cortas capacitaciones sobre el solido cimiento del entrenamiento intensivo anterior (1997-98) lograda por la presencia de 4 consultores en el campo a tiempo total (20 dias por mes). Algunos pobladores entrenados han sido empleados en otras partes fuera de la comunidad y el AE Chalalan tendencia que puede incrementarse.

Esta capacitacion de caracter masivo se constituye como uno de los mejores ejemplos de gestion con participacion local en desarrollo sostenible hecha en Bolivia y probablemente la Amazonia a nivel de ecoturismo. El componente de desarrollo turistico (AE Chalalan) demostro ser el mas exitoso de los otros componentes que conformaban el Proyecto de Desarrollo Sostenible y Ecoturismo para Jose de Uchupiamonas. Se dio oportunidad a grupos como las mujeres y jovenes de la comunidad a expresarse y a participar, lo cual incluso rompio aquellos esquemas tradicionales tan eficientes y autoritarios de poder y de intereses cortados en la comunidad, abriendo espacios para mayores discusiones a sectores aislados que luego se expresan su voz y demandan una oportunidad.

Es posible que este tipo de capacitacion en areas remotas y aisladas pueda tomar un plazo entre 2-3 años, en base a actividades intensivas con seguimiento cercano. Colaboro el hecho que la mayoria de los aprendices hayan tenido niveles educacionales basicos (leer y escribir) hasta un nivel secundario, especialmente en el caso de jovenes varones. Asi la curricula aplicada por los consultores fue mas eficaz. Quizas el proceso total para desarrollar el producto Chalalan tome hasta mas de 5 años, la mayor virtud del proyecto de San Jose de Uchupiamonas ha sido la decision de se gente de hacerlo y de buscar el financiamiento y conseguir la experiencia necesaria.

Es posible que el desarrollo del AE Chalalan pueda tambien ser uno de los proyectos financiados por el BID mas existosos, por lo menos en Bolivia, donde el impacto directo e indirecto llega a aproximadamente a un 15-20% de los hogares de SJU. Ademas su establecimiento como destino ha incrementado el perfil como producto al Rio Tuichi, a la presencia de turistas de mayor expendio y para operadores internacionales mas exclusivos, cuyos clientes pueden generar mas puestos de trabajo que otros segmentos de bajo expendio que llegan a esta parte de Bolivia.

Para 1998, el AE Chalalan ya habia superado en calidad a practicamente una decena de competidores entre agencias de Rurrenabaque y La Paz con 10-25 años de experiencia en turismo, que venden el tours al Tuichi y las sabanas del Beni. Mas que la misma importancia mundial del establecimiento del Parque Nacional Madidi y toda la

cobertura internacional que se ha hecho para este parque y el Tuichi, la conquista de los mercados del AE Chalalan fue hecha en base al esfuerzo e interes de sus propios beneficiarios que apostaron en el tiempo correcto, con el apoyo del BID, CI y un operador pequeño (*America Tours* SRL). Este operador con base en La Paz, Bolivia, logro vender la cifra record de 64% en 1999 y 53% en el 2000, de pasajeros a Chalalan, mas que otros operadores nacionales e internacionales a quienes incluso se les ha dedicado tiempo y espacio en promocion y sitios de Internet. Esta exitosa estrategia de este opetador ayuda a la consolidacion el producto Chalalan en los mercados internacionales.

El desarrollo del AE Chalalan puede igualmente considerarse quizás el ejemplo más cercano al concepto de lo que seria ecoturismo en la Amazonia y con poblaciones rurales, por el nivel de participacion de hombres y mujeres de la comunidad. A partir de la capacitacion de 1997-98, practicamente el 100% de los trabajadores pertenecen a la comunidad, desde el encargado de reservas, guias y todos los otros prestadores de servidores del albergue. En este sentido, es posible que supere a otras experiencias en ecoturismo similares en otras partes de Sudamerica.

Recomendaciones

A pesar de la experiencia del proyecto entre 1997-2001 se requiere de mas tiempo de acompañamiento por parte del ente ejecutor al beneficiario. Aun falta consolidar el concepto de empresa. La contabilidad, administracion, reservas y mercadeo aun refieren de reforzamiento y direccion. Actualmente consultores de CI estan apoyando estas actividades hasta la conclusion del proyecto (Mayo 2001) como tambien lo ha hecho un operador boliviano (*America Tours* SRL) que vende, mercadea Chalalan y entrena comuneros interesados en La Paz.

Es imprescindible que los jovenes de SJU terminen sus estudios secundarios como fue recomendado en 1998 por el equipo de consultores capacitadores. Esto garantizará que los interesados y mas competitivos puedan continuar sus estudios a niveles superiores ya sea en turismo y otros campos. Aparte, un aspecto que colaboro al exito del AE Chalalan fue que mas de la mitad de los trabajadores de este albergue han sido mujeres, uno de los sectores mas desatendidos de SJU, quienes son interes y con empeño destacaron como la fuerza laboral en los servicios, por lo que se recomienda reforzar su capacitación.

Es altamente recomendable que consultores que trabajan en Chalalan y SJU deban hacerlo por un tiempo razonable, que les permita cumplir con plazos y seguimiento necesario. Capacitaciones cortas no han dado resultado en SJU. El tiempo de los capacitadores anteriores en relación al proyecto ha consumido tiempo y energías. Capacitaciones incompletas han confundido a los pobladores. La comunidad debe asegurarse de contar con consultores o instructores con experiencia necesaria y practica. Se estima que ahora la comunidad esta mas preparada para capacitarse haciendo facil el trabajo para cualquier equipo de consultores, esta es una ventaja comparativa que puede ser utilizada para afianzar el desarrollo del AE Chalalan.

What does ecotourism mean for Europe?

Richard Denman, The Tourism Company, 11a High Street, Lollbury, Herefordshire HR8 1DS, UK (richd@acd.com)
Sylvie Blangy, Consultant, 152 Impasse des Deux Ruisseaux, 34090, Montpellier, France (sylvie.blangy@free.fr)
Herbert Hamele, ECOTRANS, Berliner Promenade 7, D-66111 Saarbrücken, Germany (ecotrans@t-online.de)

Summary

The European Charter for Sustainable Tourism in Protected Areas was developed by the European Federation of Parks (EUROPARC) to promote sound park management. A central accreditation requirement is that areas have a sustainable tourism strategy and action plan - elaborated in consultation with local stakeholders representing tourism, conservation and community interests. The Charter's context, and some issues and lessons relating to its development, are addressed in this article.

Résumé

La Charte europeenne pour un tourisme compatible avec le developpement durable dans les zones protegees est le fruit du travail de la Federation europeenne des parcs (EUROPARC) pour promouvoir une gestion saine des parcs. L'adoption, dans le domaine du tourisme, d'une strategie et d'un plan d'action compatibles avec un developpement durable, elabores en concertation avec les parties prenantes locales representant les interêts des acteurs du tourisme, des organismes de sauvegarde et des populations locales, est une condition primordiale pour obtenir l'homologation. L'article s'interesse au contexte dans lequel la Charte a ete elaboree, aux problemes que son elaboration a souleves et aux leçons qui en ont ete tirees.

Resumen

La Carta Europea para el Turismo Sustentable en Areas Protegidas fue desarrollada por la Federacion Europea de Parques (EUROPARC) para promover una administracion acertada de los parques. Uno de los requisitos centrales para obtener una certificacion es que las areas tengan una estrategia de turismo y un plan de acción sustentables elaboradas en conjunto con los accionistas locales que representan los intereses de los sectores de turismo, conservacion y comunidad. Este articulo contiene el contexto de la Carta y algunos problemas y lecciones relacionadas con su desarrollo.

Many people associate the term "ecotourism" first and foremost with continents that are less populated and developed than Europe, where "nature" has a higher profile as a tourism resource and conservation issues may be more stark. However, the principles of ecotourism are as important in Europe as elsewhere. Some valuable initiatives are occurring in Europe that could be reflected in other parts of the world.

To understand the priorities and the actions being taken in Europe, it is necessary to consider some of key features that influence visitors' relationship to nature.

Europe has a wide variety of landscapes and ecosystems. However, away from the mountains, sizeable areas of wilderness are few. These areas are mainly in the Arctic north and the eastern fringes (forests and wetlands). The number of species of larger mammals is limited, though wolves, bears and lynxes are found in some regions. Opportunities for bird watching are widespread.

In general, the quality of the landscape – rather than specific flora or fauna – is the primary tourism resource for visitors with a love for the

natural environment. Throughout most of Europe the landscape has been shaped by man. It is often the interplay of small fields, woodlands, rivers and lakes, together with the cultural and historic interest of farmsteads and settlements, that is important with respect to visitor appeal and an area's biodiversity.

The concept of "sustainable rural tourism" rather than "ecotourism" has prevailed in Europe. This concept embraces concern about nature conservation within a context of integrated rural area management and development. Nevertheless, the term "ecotourism" is sometimes used to refer more precisely to a form of tourism in which observation and interpretation of nature provides a strong component of the offer, and where there is particular concern to use tourism actively to support nature conservation.

Europe has many thousands of protected areas. They range from sites protected because of a single species, to large regional or national parks that are frequently subject to multiple land ownership and within whose boundaries economic activities and settlements already exist. The latter areas have the greatest interface with tourism. Hardly any of them has boundary gates and admission fees. Park management relies heavily on a combination of planning controls, measures to direct visitor flows, and work in partnership with local authorities and communities. Tourism is increasingly seen as a positive force for cementing this relationship and a source of resources for management.

Two important trends are influencing the response to rural tourism, including ecotourism:

- On the supply side, the product in Europe is made up of extremely large numbers of very small family businesses. These may be located in the general countryside, or in or around protected areas. Economic circumstances, particularly in the agricultural sector, and structural changes in support systems are creating pressure for more diversification of commercial activities, notably regarding tourism. This has important implications for standards and management.
- On the demand side, the relatively close proximity of many of Europe's parks and other protected areas to sizeable population centres has brought increasing pressure, especially from day visitors and holidaymakers taking short breaks. Independent travellers dominate the market (the proportion of organized tour programmes is very small). Visitors are increasingly interested in activities such as walking, cycling and other forms of recreation, but are also becoming more environmentally aware and are demanding good quality experiences and information.

The implications for Europe are that:

- the promotion of ecotourism, including initiatives such as the International Year of Ecotourism, can strengthen awareness of nature conservation issues within broader rural tourism;
- there is a need for an integrated approach to nature, culture and rural development;
- tourism and visitor management practice in protected areas should be strengthened;
- coordination and leadership are needed among rural tourism businesses, to make them more environmentally aware; and
- growing visitor interest can be used more effectively to stimulate and support better environmental practice.

Management response

Many initiatives seek to deal with these issues. Initiatives being taken at a European level include:

Integrated Quality Management (IQM) of rural tourist destinations

The need to provide rural tourism destinations that offer high quality visitor experience coupled with concern for the environment is increasingly recognized. The European Commission is promoting the concept of IQM of destinations, based on a study drawing together practical experience from case studies in 13 European countries. This model requires three main elements to be in place:

- a process whereby all local stakeholders work together according to an agreed strategy;
- attention to detail concerning all aspects of the visitor experience in the tourism chain, from before leaving home to post-visit experiences; and
- a systematic cyclical process of identifying visitor and local needs, setting standards, undertaking improvement and obtaining feedback.

Sustainable tourism principles are fundamental to this process, and there are moves to strengthen the relationship between IQM and Local Agenda 21 initiatives. To illustrate this integrated approach, some important issues highlighted by the IQM case studies are described below. These issues have implications for the management of ecotourism as well as that of rural tourism.

Better integrating landscape, agriculture, food and tourism

In many rural areas in Europe there has been growing recognition of the value of encouraging visitors and tourism enterprises to buy local produce, not only to support the local economy but also to help preserve traditional agricultural practices and landscapes. In the Bregenzerwald region of Austria, the lush green upland landscape is maintained by a tradition of dairy farming and production of high quality milk and cheese. Faced with stagnation in tourism and in farming, the region decided that the way forward was to adopt a joint "Nature and Life" strategy, with the two sectors helping to rejuvenate each other.

Action has centred on networks of farmers, food producers and tourism enterprises. The Bregenzerwald Cheese Route has become a focus of the tourism offer, providing the context for a variety of media promotions, events and training programmes. The region has also built links with other areas seeking to promote tourism through the quality of local produce.

Involving a wide cross-section of community services

Integrating the many different services operating in local rural communities into the process of destination management can benefit visitors, the environment and the community. For example, in the small community of Skaftárhreppur, Iceland, the local bank, post office and general stores are all involved in the tourism association. The stores have been helping a group of agrotourism operators in their efforts to become more environmentally friendly through a programme of ordering supplies in bulk to avoid unnecessary packaging. Through the tourism association, various members of the local community are being made more aware of environmental impacts and

European Charter for Sustainable Tourism in Protected Areas: 12 Principles

Underlying aims

1. To recognize Europe's protected areas as a fundamental part of our heritage, which should be preserved for (and enjoyed by) current and future generations
2. To develop and manage tourism in protected areas in a sustainable way, taking account of the needs of the environment, local residents, local businesses and visitors

Working in partnership

3. To involve all those directly implicated by tourism in its development and management, in and around the protected area

Preparing and implementing a strategy

4. To prepare and implement a sustainable tourism strategy and action plan for the protected area

Addressing key issues

5. To provide all visitors with a high quality experience with respect to all aspects of their visit
6. To encourage specific tourism products which enable discovery and understanding of the area
7. To communicate effectively to visitors about the area's special qualities
8. To increase knowledge of the protected area and of sustainability issues among all those involved in tourism
9. To ensure that tourism supports and does not reduce the quality of life of local residents
10. To protect and enhance the area's natural and cultural heritage, for and through tourism
11. To increase benefits from tourism to the local economy
12. To monitor and influence visitor flows to reduce negative impact.

The above principles constitute the framework for the Charter. Under principles 3 to 12, there is a list of required actions against which adherence to the Charter can be checked.

have become directly involved in simple tasks such as footpath maintenance.

Detailed and accurate visitor information

The IQM case studies demonstrate the critical importance for ecotourism of the quality of information provided to visitors. In some areas the main responsibility may rest with tour operators. However, in much of Europe individual travellers need to be given the right information where and when they can most effectively use it. In Ballyhoura, Ireland, not only has a tourist information centre been established, but visitors receive an information pack and questionnaire prior to arrival. It has also been recognized that accommodation hosts provide a key to communication. They are trained in listening to guests and given a model template around which their own visitor information can be developed. Concentrating this information on the immediate local area encourages visitors to spend more time in the community and less in extensive travelling, with consequent economic and environmental benefits.

Visitor feedback

Building on customer awareness and feedback to make improvements and changes is fundamental to the IQM approach. Good tour operators are usually adept at doing this, but it has proved more difficult at destination level. Three types of feedback were pursued in various ways within the IQM case studies:

- regular surveys of visitors, which can take an objective measure of satisfaction as against expectation and changes over time;
- a process enabling all visitors to make constructive comments and criticisms covering the destination as well as individual service providers;
- secondary feedback to destination managers on consumer reaction from enterprises and other organizations that come into contact with them.

Communion with small enterprises

A challenge for most projects seeking to improve quality and sustainability in rural areas is to find ways to communicate effectively with small tourism enterprises and help them respond to opportunities. Provision of appropriate training and advisory services is very important, but persuading enterprises to take them up has proved difficult.

A creative idea adopted in the Vosges du Nord area of France has been to use a softer approach that avoids the use of the term "training". Enterprises have been encouraged to visit the area to familiarize themselves with cultural and environmental sites and issues. Visits have been combined with meetings in which topics such as customer care and improving performance are discussed. This approach has led to effective networking and sharing of ideas among participants.

A similar approach has been pursued very successfully in parts of Wales.

Dairy farming in Bregenzerwald, Austria, shapes the landscape and the tourism product

The European Charter for Sustainable Tourism in Protected Areas

The importance of Europe's parks and protected areas as tourism destinations has underlined the need for sound management. One way to promote sound management is to establish a model of good practice and identify areas that follow it. The European Federation of Parks (EUROPARC) has developed a Charter for Sustainable Tourism that can apply to a broad spectrum of protected areas. A parallel initiative, the Worldwide Fund for Nature (WWF) Pan Parks programme, focuses on larger parks that follow similar principles but are able to offer a particular wilderness experience. These two programmes are recognized by the European Commission as providing a basis for extending good practice throughout the whole of its Natura 2000 protected area network.

The Charter was developed over a period of five years, initially using information on ten pilot parks and input from an advisory group of 25 sustainable tourism experts and representatives of tourism operators. It is based around 12 principles. The Charter is about recognizing parks that have set up the right structures and processes for development and management of sustainable tourism, accepting that there will be wide differences in the actual experiences offered by individual parks. A central requirement is that each park should have a sustainable tourism strategy and action plan elaborated in close consultation with local stakeholders representing tourism, conservation and local community interests.

The first round of applications in 2001 has led to seven parks being recognized under the Charter. An ongoing programme to promote further applications is being developed. Each applicant park is asked to formally agree to the principles and submit a report on the actions taken to address them. This report is assessed by an external verifier, appointed by EUROPARC, who visits the park and holds interviews with relevant stakeholders and with the park management.

Some issues and lessons arising from the development of the Charter include:

The need to make the process relevant to – and valued by – parks themselves

A problem facing any accreditation process of this kind is how to sustain it over time. Ideally, there needs to be support and funding from external agencies such as the European Union. However, there also needs to be commitment by the actual bodies affected, in this case the parks themselves. They must see the value of accreditation; otherwise it is not worth undertaking and will remain largely an academic exercise that will eventually wither.

The importance of clarity and simplicity

With hindsight, the development phase was too long. Park requirements and materials concerning the Charter were too complicated. Park managers, including some in pilot parks, were reluctant to use them. The message and the medium had to be simplified and clarified.

The value of benchmarking

The Charter provides a very useful way for each park to measure its actions against agreed good practice. Verifiers report to the parks themselves, as well as to an evaluation committee. This process can also directly help raise management standards. In all cases where parks have been recognized

Ecotourism source markets in Europe: a first overview

Within the framework of the International Year of Ecotourism 2002, the World Tourism Organization (WTO) carried out a research programme on ecotourism source markets in six European countries: Austria, France, Germany, Spain, Italy and the United Kingdom. It was designed as a comparative study, with common definitions of ecotourism and methodology being used.

The generating market for ecotourism and its relative importance in the tourism marketplace was to be assessed. The summary below presents preliminary results. It is expected that complete results will be published in January 2002.

Understanding of the ecotourism concept differs among countries, but the WTO definition used for the survey is generally accepted. This definition includes all forms of activity in nature, not just experiencing nature and wildlife watching in a strict sense. It has a strong cultural and environmental education component. "Nature tourism" and "ecotourism" need to be distinguished more clearly. The use of the word *ecotourism* is currently very limited in Europe. Other terms are preferred, such as *sustainable, responsible, environmental* and *ethical tourism.*

The activities of tour operators specializing in ecotourism are based on a strong commitment to nature and the environment. They include: dissemination of codes of conduct; ecotourism guidelines for travellers and tour operators; donations to charity; support for local conservation efforts and local communities; the offer of participatory packages; preference to local suppliers; and development of partnership and joint venture programmes with local communities and protected areas. Operators make such activities known through their media image and self-representation.

The countries studied are among the most important outbound and inbound tourism markets in Europe – and in the world. Their strong links and interdependence should be emphasized.

Measuring the ecotourism market is not easy. Ecotourism is considered a small niche market, but one which is continuously growing. Some 6-10% of tour operators in each country specialize in ecotourism. The vast majority of these operators are small or very small.

Ecotourism visits make up 1-10% of all package tours sold. Tour operators have indicated that they expect the nature tourism and ecotourism markets to continue to grow. Sensitivity to the environment and the level of requirements are increasing in all segments of the conventional market.

The general travel behaviour pattern anticipated during the next ten years is one of general growth and "distribution" among different destination regions. In particular, this is true with respect to destinations in European countries. Steadily growing interest (and thus market potential) are anticipated in regard to long-distance tourism.

Ecotourists are nature lovers, but their expectations are not limited to experiencing nature and watching animals. They also have a general desire for change and a specific desire to experience local cultures and lifestyles. From the point of view of most ecotourism customers, cultural and other activities, especially sport, should be part of the trip.

So far, there has been a preference for individual ecotourism trips. However, there are good prospects for tour operators since realization of market potential is still relatively low.

In principle, specialist tour operators offer visits to destinations all over the world. From the point of view of customers in the countries studied, European travel destinations predominate. Very few destinations can be considered "pure" ecotourism destinations.

The core target group for ecotourism is between 30 and 59 years old, with higher education and above-average income.

Ecotourism operators use the same spectrum of marketing channels and techniques as other operators. Word of mouth is the most important means of promotion and information dissemination for ecotourism-oriented operators in the countries studied. Reservations and bookings are mainly accepted via specialized operator agencies and their catalogues. Use of the Internet for this purpose has been increasing tremendously.

under the Charter, this has been subject to compliance with recommendations to address certain identified weaknesses.

The value of an external stimulus to increase local interest

One of the Charter's greatest benefits has been its role in providing an incentive to bring local interests together. For example, in the Spanish park Zona Volcanica de la Garrotxa, a well established network of tourism sector groups has been considerably strengthened through working together towards the goal of Charter regognition. Publicity surrounding accreditation can also be used locally to raise the profile of sustainable tourism and the role of the park.

Coordination of ecolabelling

Over the last ten years Europe has seen dramatic growth in the number of ecolabels used in the tourism sector, which give accreditation to individual enterprises demonstrating environmental good practice. There are over 30 such labels in the accommodation sector alone. These are listed and described on the website *www.eco-tip.org*.

It is widely accepted that voluntary self-regulation and commitment to environmental improvement among enterprises is the way forward, but that to encourage business proprietors to take part a marketing advantage should be demonstrated. At the moment the vast majority of holidaymakers are unaware of the existence of environmental schemes in the tourism sector. Large scale outreach to the public is needed in order to publicize the awarded products. Moreover, there has been little attempt so far to ensure that ecolabels for tourism are using a common set of criteria, or to prevent new labels emerging through people "reinventing the wheel" rather than learning from others.

This situation is being addressed through the European VISIT initiative. The initiative has four interrelated objectives:

- to demonstrate how a set of broadly agreed environmental indicators and benchmarks for ecolabels can be used to assess their effectiveness;
- to demonstrate how an ecolabelling partnership can be achieved, leading to common standards, increased quality and transparency and better promotion;
- to demonstrate how ecolabelled enterprises can be better integrated into the offers and promotions of the European travel trade;
- to demonstrate how consumer awareness of, and demand for, environmentally friendly tourism products (as identified through ecolabelling) can be increased through implementation of a European image campaign during the International Year of Ecotourism and in 2003.

Stimulating and directing visitor interest

A variety of initiatives are being taken within Europe to develop a deeper and more informed market response to ecotourism and conservation issues.

Little is currently known at a European level about the size and nature of the market demand for ecotourism. This problem will be partly addressed through the participation of six European countries in a coordinated study of the ecotourism market, under the aegis of the World Tourism Organization.

Besides the development of ecolabels, mentioned above, various organizations are promoting branded ecotourism products in specific sectors. One example is the European Centre for Eco-Agro Tourism, which promotes small scale tourism enterprises on farms using organic agricultural methods. The number of specialist tour operators promoting ecotourism programmes within Europe as well as further afield has grown, with some offering participation in conservation activities.

Visitor awareness of conservation issues has been increased through considerable improvement of interpretation techniques at natural and cultural heritage sites. Dissemination of creative ideas and good practice has been encouraged through numerous bilateral programmes and wider networks, many supported by the European Union.

Harnessing visitor support for conservation is a topical issue in Europe. The introduction of tourist taxes, as recently occurred in the Balearic

Islands, is often controversial. Some attention has been paid to voluntary methods of obtaining funding from visitors. A study of this process carried out for the European Union (which introduced the term "visitor payback" to describe it) evoked considerable interest. The study identified a significant latent willingness among visitors to make contributions towards the conservation of areas they were visiting, but found that success depends considerably on the method of approaching them. The addition of supplements to payments (such as hotel bills), which visitors can opt out of, was found to offer the greatest potential and has been introduced successfully by a number of enterprises in the UK.

Global exchanges of markets and knowledge

Globally, the main European contribution to successful ecotourism has arguably been to supply environmentally motivated tourists as the lifeblood of projects in developing countries. For example, "nature" has been recorded as a primary motive for around 40% of German tourists. At least as much can be offered through exchanging knowledge and good practice in tourism management, as a two way process. The International Year of Ecotourism will help Europeans learn more about the principles of ecotourism and how they have been applied elsewhere.

The authors of this article are members of ECOTRANS, a network of European professionals in this field seeking to foster such exchanges. They can be contacted through www.ecotrans.org.

Evolution of the concept of visitor use management in parks

Paul F. J. Eagles, Professor, Department of Recreation and Leisure Studies, University of Waterloo, Ontario, Canada, and Chair, Task Force on Tourism and Protected Areas, World Commission on Protected Areas, World Conservation Union (IUCN), Gland, Switzerland (eagles@healthy.uwaterloo.ca)

Summary

If parks' ecological, social, economic and cultural values are to be protected, visitor management is of basic importance. Governments are requiring parks to be more financially self-sufficient. Instead of concentrating on limiting visitor numbers, a more sophisticated management approach is being developed. Such an approach encourages public involvement in goal-setting, assesses visitor satisfaction, and rewards competent financial management.

Resumé

Si l'on veut proteger les valeurs ecologiques, sociales, economiques et culturelles des parcs, une bonne gestion des visiteurs est essentielle. Les gouvernements exigent que les parcs soient davantage autonomes sur le plan financier. Une nouvelle methode de gestion, plus sophistiquee que celle qui consiste principalement à limiter le nombre de visiteurs, est en train de voir le jour. Elle encourage la participation du public à la fixation d'objectifs, evalue le degré de satisfaction des visiteurs et recompense les modes de gestion financiere efficaces.

Resumen

Si los valores ecologicos, sociales, economicos y culturales de los parques deben ser protegidos, la gestion de los visitantes es de importancia crucial. Los gobiernos estan exigiendo a los parques que mejoren sus finanzas a fin de ser autosuficientes. En lugar de concentrarse en limitar la cantidad de visitantes, se esta desarrollando una gestion mas sofisticada. Este nuevo enfoque fomenta el compromiso publico para la fijacion de objetivos, evalua la satisfaccion de los visitantes y recompensa la gesion financiera competente.

Approaches to the use of public parks have evolved considerably over time. The earliest parks in Europe were created for the exclusive use of the privileged classes of society. Common people gradually obtained access, but only under the strict supervision of the authorities. When the concept of setting aside special lands spread to North America, the parks created by governments had an explicit goal of widespread public use. However, the earliest park management agencies adopted the authoritarian approach existing in Europe.

During the 20th century massive increases in the availability of inexpensive energy led to societal prosperity and extensive individual travel, and thus to increased park visitation. In the 1960s public parks began to be very heavily used. Concerns about negative social and environmental impacts grew. Emerging public consciousness demanded more responsive park management agencies. At about the same time, the concept of ecology (with its message of the importance of natural environment systems in parks) became more widely known. Increases in visitation, and the power of the concept of ecology, stimulated governments worldwide to undertake massive expansion of park systems.

Systems for visitor management

Park managers with a background in forestry understood that each forest had a certain productive capacity. The notion of carrying capacity in parks – initially defined as the environmental limits necessary to support populations of species – began to take shape, and to include humans and limitations on human use of parks. As a result, this resource-based concept of carrying capacity was adopted as a framework for the first management of park visitation.

The concept of carrying capacity is straightforward for a farm or forest with a relatively simple production system. The goals are clear, and productive processes obvious. Parks are much more complicated, with multiple and often competing goals and productive processes. They have ecological, social, economic and cultural roles in society. The carrying capacity concept was too limited for the task of visitor use management, with its simple question, "How many is too many?" Alternatives were necessary.

Interpretations and refinements of carrying capacity for visitor management were developed,

subsequently. Two widely used concepts were *Limits of Acceptable Change (LAC)* and *Recreational Opportunity Spectrum (ROS)*. Both were developed in the United States in the context of a wealthy populace undertaking high levels of travel to public lands. The crowding in many parks created a demand for a management response. Both LAC and ROS treat the issue of visitor use levels and crowding as a fundamental area of concern. These concepts were therefore used as the management response.

The development and refinement of visitor management systems such as LAC and ROS benefited from strong university programmes in park management in the United States. Such programmes were notably absent in many other countries.

The LAC concept is a progressive refinement of the more limited carrying capacity concept. LAC answers the question: "What are the acceptable biophysical and social conditions in a park?" Within the LAC framework, management concentrates on determining the desirable goals for a park, then adopts the actions necessary to attain these goals.

The success of LAC is partially due to its strong emphasis on public involvement in identifying acceptable biophysical and social conditions for a park. It also explicitly recognizes that capable management is necessary if the stated goals are to be attained. Therefore, management must adapt to public-determined goals. This management approach helped change the authoritarian approach of many park agencies.

The ROS process identifies a range of recreational opportunities in a given landscape, typically ranging from a core wilderness area with limited use, through a zone with some intensive recreation, to a periphery containing widespread activities of many types. The ROS process is often portrayed as similar to the Biosphere Reserve System, with a core area and successive layers of landscape types around the core. It looks at the biophysical, managerial and social attributes of the system that produce recreational opportunities. This method was heavily influenced by the peculiar US legal framework of legislated wilderness areas surrounded by other federal lands, themselves in a rural landscape matrix.

In the 1990s, the limitations of the US management systems became apparent during attempts to apply them worldwide. Other considerations became prominent, such as park finance, pricing policy, service quality, community involvement in tourism, community impacts outside the park, and tourism industry management. In wealthy countries park visitors are also voting citizens.

Citizen visitors demand that governments provide the resources necessary to manage to the level deemed suitable by the visitors. However, many governments have been unable to provide the financial resources to manage parks to the level desired by First World tourists. Therefore, other sources of funds were needed for management. The most obvious source was the tourists themselves.

The park systems of Eastern and Southern Africa were the first to develop successful park management systems dependent upon financing provided by fees and charges generated by tourism flows. Interestingly, they were also successful in turning tourists' positive feelings towards the parks into foreign aid contributions from their home countries. Many of these systems function with operating funds from tourism income and capital funds from foreign aid. This requires an agency to be more client-focused. The idea of developing a management system that involves finance as a critical component of visitor management is spreading globally from Africa.

As concepts of financial management spread through parks, other business concepts entered into management. Starting in the 1980s, industrial manufacturing emphasized product quality, closely tied to consumer satisfaction with the product. Strangely, this idea of client satisfaction with a service was slow to enter park management. However, a few parks and a few park systems started systematically to measure the satisfaction of their clients with the environments and services provided.

At least one agency, Parks Canada, formally adopted a service quality goal, with a quantifiable measurement device to determine attainment of that goal. The emerging concept of client satisfaction is closely tied to the allied concept of financial self-sufficiency based upon tourism. Satisfied customers are much more likely to return, provide positive messages to others, pay appropriately for services, donate money and follow the rules.

Management training programmes

As park visitor management has become more mature and sophisticated, the art of management training has needed to change. Many universities have developed training programmes to emphasize leisure studies, tourism and business management as core proficiencies within park management programmes. This trend is most obvious in Australia, Canada, New Zealand and the US.

Some agencies, such as Parks Victoria in Australia, have become active in encouraging local universities to develop programmes suitable for the next generation of managers. Strangely, though, numerous countries still train their park professionals as if ecology was the only priority of park management.

Park managers utilize a complicated series of permits, licenses and concession agreements with the private sector for provision of visitor services. These range from individual tour operators obtaining a permit to guide tourists through a park, to a specially trained company given a license to provide specialist services to visitors, to a service company with a monopoly on provision of products and services.

Virtually all parks have such arrangements, and the services provided are often critical to the visitor's experience. For example, the vast majority of guiding services, consumer products, prepared foods, transportation, groceries, souvenirs, arts, crafts, literature and information are provided by the private sector. Most of the money generated by park tourism flows through the private sector, due to the income derived from the charges for these products and services.

Profit-oriented private sector involvement in visitor services requires a correspondingly large management capability within public sector park agencies. The rules underlying access and licenses need careful development. Tendering of contracts calls for efficient and competent processes. The monitoring of license stipulations is necessary.

Many agencies find that involvement with private sector permits, licenses and concessions is one of their most problematic responsibilities. There is a notable lack of scholarly review of this important function of the parks and, as a result, a paucity of literature. No independent review of the advantages or disadvantages of various approaches has been done. There are no international guidelines on the subject. This area of park management needs substantial work in the future.

As more parks are required by government policies to become financially self-sufficient, emphasis is shifting towards consideration of visitor management in a business context. The focus is shifting from simply limiting numbers to a much more sophisticated approach using public involvement in goal-setting, consideration of visitor satisfaction, and competent financial management. Some agencies have achieved the structural ability to function like private companies, with internal revenue management as a key aspect. Several governments provide a government-appointed body to serve as the agency's Board of Directors.

Examples from Canada

Many park agencies are moving towards increased involvement with the various visitor services that were formerly the exclusive purview of the profit-oriented private sector. This is due to the attraction of the income available through sales of consumer services and products to park visitors.

Some agencies have developed a high degree of sophistication in this regard. A prominent example is the Niagara Parks Commission in Canada, which manages the environment and tourism along the Canadian side of Niagara Falls. It provides virtually all tourism products and services for 16 million visitors per year, including a range of restaurants and stores, a money-changing operation, specialized recreational services, roads, parking, mass transit, and frequent special events. One significant activity, a boat ride on the Niagara River to the base of the Falls, is operated by a concessionaire. The Niagara Parks Commission is financially self-sufficient in both operating and capital funds, due to its sophisticated tourism management operations and the very high volume of tourism.

In a few cases, park agencies use a proxy group such as The Friends of the Park to provide many aspects of visitor services. The Friends is a membership group providing many of the visitor products and services formerly provided by the profit-making private sector. All profit is directed to park projects deemed valuable by the Friends. The Friends provide valuable opportunities for local groups and businesses to become involved in

a park in a fashion not available through the typical government agency model of management. For example, local communities, aboriginal groups, stores, lodges, hotels, community groups, and many concerned park visitors can contribute to the park through the Friends.

There are numerous parks with too few visitors. For example, the Province of Ontario has 272 provincial parks. Only 106 parks are operational, i.e. have staff and visitors; the remaining 166 have no staff, no visitors, and little on-site management. The issue of "paper parks" is all too common. Such parks were created to satisfy demands for ecological representation, with no commitment to staff or management. Scarcity of visitation means that no public constituency develops to demand an appropriate level of government commitment to management.

Lack of visitation also means there are no locally generated funds. Some park agencies partially address this issue by pooling tourism funding, with high-income parks subsidizing those with few visitors and low incomes.

Visitor management in the 21st century

Park visitor management evolved considerably during the 19th and 20th centuries. In the 21st century, there will be an emphasis on several important areas. Visitor management will become much more sophisticated, with principles derived from service management being applied to parks. Visitors will be treated more like clients, and their needs and wants will be given higher priority.

Agencies will develop more sophisticated management approaches and receive greater benefits from the cash flow generated by park tourism. Professional management training will move beyond resource management to leisure, service and business management. Transfer of information and management principles will occur widely and quickly. Ecological management concerns will be dealt with under the principles of biodiversity conservation or ecological integrity, two ideas currently competing for prominence, rather than the older, more simplistic carrying capacity concept. There will be better integration of the ecological, social, economic and cultural roles of parks within broadly based policy, planning and management structures.

There is a move to consider park visitors not as visitors to a park, or even as clients of an agency, but as owners of the park. The entire focus of management changes when those who work in a park or provide for the public's needs consider that they are dealing with the park's owners.

Many agencies will become much healthier as they gain higher levels of finance and of public satisfaction. Financially self-sufficient agencies with a satisfied public clientele are in a strong political position. Such agencies are in a much better position to tackle the very considerable problems of environmental and cultural conservation that will also grow in this century. Financial contributions from tourists increase the capacity of park management to provide service to the public and protect the environment, with consideration of increased financial independence, more staff, political independence and more sophisticated management approaches.

However, the public good concept of parks cannot be ignored. Protecting and managing parks for the public good demands that central government provide some of the funds, as everyone in society benefits from parks, whether or not they visit them.

One challenge is to transfer experience in visitor management, typically held in parks in the developed world, to parks in the developing world. Given increasing park visitation and the growing importance of park tourism to many economies, it is essential to increase the level of expertise in visitor and tourism management in most park systems, especially in parks in developing countries.

The next century will see a reduction in the growth of parks. Fewer new parks will be created. The world will move from the park creation phase into the long-term park management phase. Visitor management will be one key to the successful protection of the ecological, social, economic and cultural values of parks.

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Environmental management in a professional services firm

Michael J. Kelly, KPMG, UK Head of Environment, 8 Salisbury Square, London EC4Y 8BB, UK (michael.kelly@kpmg.co.uk)

Summary

Environmental management has received strong support within the large KPMG advisory firm. In the UK, the firm's environmental policy encompasses supply chain management, reduced energy and paper consumption, increased energy efficiency, and a range of staff awareness initiatives. KPMG carries out internal social and environmental reporting and provides related advisory services to other companies, building on its own experience.

Résumé

La gestion de l'environnement a reçu un soutien massif au sein du grand cabinet conseil KPMG. La politique environnementale de la societe au Royaume-Uni couvre la gestion de la chaine d'approvisionnement, la réduction de la consommation d'energie et de papier, l'amelioration de l'efficacite energetique et une série d'initiatives pour sensibiliser le personnel. KPMG publie des rapports sociaux et environnementaux internes et, fort de cette experience, fournit des services de conseil dans ces domaines à d'autres entreprises.

Resumen

El manejo del medio ambiente ha recibido un amplio apoyo dentro de la enorme consultora KPMG. En el Reino Unido, la politica ambiental de la compania comprende la gestion de la cadena de provision, el consumo reducido de energia y papel, una mayor eficiencia en el manejo de la energia y una cantidad de iniciativas para la concientizacion del personal. KPMG elabora informes sobre sociedad y medio ambiente y provee servicios de consultoria relacionados para otras empresas, a medida que va adquiriendo mas importancia.

KPMG is a global network of professional service firms providing financial advisory, assurance, tax and legal and consulting services. It has over 100,000 employees worldwide and operates in more than 150 countries. In the UK, KPMG provides a full range of assurance and advisory services to enterprises. This includes public and private sector concerns. Clients range from small and medium-sized enterprises, or owner-managed businesses, to the largest multinational corporations. KPMG UK has approximately 12,000 staff.

The environmental policy of KPMG UK

In 1998, KMPG took a long hard look at the environment in which it operated and considered all the strategic risks that could have an impact on the firm. The purpose of these reviews, now carried out on a frequent basis, is to optimize business. We all live in a fast-moving world, which is increasingly globalized and subject to diverse and diffuse pressures. KPMG decided that it made good business sense to bring together all its environmental activities, and to ensure that these were managed in a coordinated way to deliver maximum value. This led to the creation of a new environmental management function within the firm, formed at the end of 1999.

KPMG's original environmental policy, in existence since 1990, was created long before such policies were common in either the private or public sector. It acknowledged the firm's direct and indirect environmental impacts. Concern for prudent use of natural resources was a feature of the original policy, as was acknowledgement that the business advice provided by KMPG has environmental impacts.

In early 2000, when the firm's environmental policy was revised, the opportunity was taken to consult with all heads of the business. This led to a consultation process across some 300 of the firm's senior management and included external stakeholders. The resulting document was formally presented to the UK Executive (the partners within the firm charged with operational responsibility for the direction of KPMG) and became

Each KPMG employee and each supplier retained by KPMG is responsible for adherence to the principles of this policy. The UK Executive Board will regularly review the status of implementation of this policy.

1 October 2000

firm-wide policy on 1 October 2000. This date is significant, in that it marks the start of the financial year and underlined to a wide range of stakeholders the firm's view of the importance of integrating environmental and economic issues.

Launching of this policy was itself carried out with the absolute minimum of natural resource consumption. All staff within the UK are linked to a single computer intranet platform. This means communication by electronic means is both targeted and timely. A series of "teaser" screen savers were developed, focusing on different aspects of the firm's environmental performance. For example, in the week before the launch of the environmental policy the screen savers across the UK asked questions such as "Do you know how many million miles are travelled by KPMG staff each year?" and "What happens to KPMG confidential paper?"

Similar themes were developed regarding water consumption and waste management. On the day of the launch, screen savers directed staff to a new intranet site which had gone live that day, providing full details on the environmental policy and supporting programmes to ensure timely implementation and adequate measurement, and give details of future reporting aspirations.

Use of modern communication methods ensured that all staff were advised of the new policy, including implementation requirements affecting them, and that they received key information about the firm's environmental impacts and how staff could help manage and reduce these impacts.

KPMG's environmental management system

For any management system to succeed in a business like KPMG, it needs to be flexible, people-focused, and capable of being implemented at the local level. To embed environmental management in every aspect of the firm's activities, a two-pronged approach was therefore required:

- *structural changes*: working through our supply chain to ensure that the structures we have in place fully support our environmental aspirations;
- *staff awareness*: education and training to ensure that all business activities are undertaken in a fully environmentally responsible manner.

Supply chain management

There are very few areas of activity in which procurement does not include environmental considerations to some extent. The environmental

management function within the firm comprises a small team working at the corporate level. Therefore, implementation of environmental management becomes a responsibility of the business. In supply chain management we have revised our "invitation to tender" so that it sets out our requirements that all suppliers fully and actively support the firm's environmental policy, and that they outline their own commitment to environmental protection.

This precondition for doing business with KPMG has not inhibited the tender process. We have found that, in practice, suppliers welcome our engagement in this area. Environmental management is one of the criteria considered in selecting suppliers of goods and services to the firm. This is not undertaken in a "negative screening" fashion, but using a partnership approach. Where the suppliers selected do not fulfil all environmental criteria, we will work with them to improve both our own and their environmental performance.

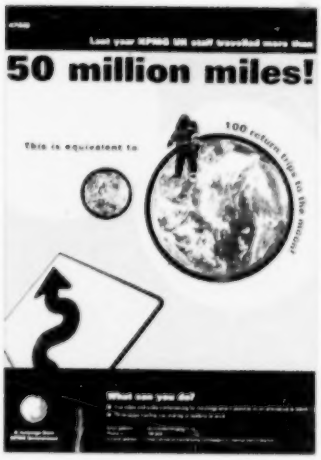
During the past year the range of goods and services subject to environmental scrutiny has been considerable. They include everything from provision of business travel through airline suppliers, to business stationery (including recyclable and recycled products), to the maintenance contract for the refurbishment of the buildings KPMG occupies, and many others. This engagement at a structural and national level provides the framework in which our staff can operate giving due consideration to environmental issues. Below are some examples of our impacts and how we are starting to control them.

Greenhouse gas emissions

We have calculated GHG emissions arising from business travel and use of utilities and are setting targets to reduce energy consumption and maximize energy efficiency. We now purchase electricity for our larger sites from renewable sources. This covers 80% of our employees and more than 90% of our energy needs.

For the year ending 30 September 2000, our emissions from these sources contributed over 30,000 tonnes of CO_2 to the atmosphere. At that stage we did not know the strength of our performance or the level of improvement we would be able to make. Our first steps were to integrate measurement and reporting of consumption into existing financial reporting processes. This requires system changes that take time. They were planned so as to cause the least disruption to the business. Such changes allowed us to calculate the firm's total energy consumption (62 million kWh in 2001) and to estimate what is best in class for operating our property estate. The next stage has been to enter into a binding agreement with our maintenance providers, so that we can work towards this optimal performance level over the long term.

Significant environmental and economic improvements should result. In addition, we have centralized our energy purchasing arrangements and purchased green energy – that is, energy generated from renewable sources – for all our sites consuming above the minimum contract level. This will result in significant environmental benefits. We need to ensure that this resource is conserved through staff awareness-raising. There is not an infinite supply of green energy; while we have reduced our emissions, we still need to concentrate on reducing our consumption.



The climate in which we operate is changing, businesses are becoming more accountable for their actions, and more is asked of them. We are leading professional advisers and we lead by example, including how we manage environmental issues.

Alan Reid, Head of Finance and Infrastructure, November 2001

Business travel is being addressed by providing alternatives such as audio and video conferencing, as well as measuring and reporting (internally and externally) our actual performance levels. In the last financial year, KPMG employees travelled over 100 million kilometres on business. A substantial part of this travel is client-driven, so that any change must be accepted by our clients as well as the staff. While this will take time, there are small changes we can make now (and have made) to reward changes in behaviour. Increased mileage allowances for passengers rewards car-sharing, as does preferential car parking spaces. Professionally managed video and audio conferencing facilities, with appropriate awareness-raising and training, increase "travel avoidance".

Providing clear feedback is important. If staff know that we avoided a total of more than 450,000 miles of travel in the first month after the system went live, this in itself is a motivator. We are translating these figures into CO_2 avoided, so that we can present all this information using one common currency.

Paper usage

The volume of paper consumed is a significant issue for any service provider. Where the service is the transfer of intellectual capital, various media are employed – including video and direct dialogue.

Measuring the consumption of all types of paper is a difficult and time-consuming task. We have determined that our use of white A4 copier paper is a good proxy measure of overall paper consumption. It represents the most significant percentage of our purchase by volume. By changing white paper usage patterns, we will influence usage of other paper types without losing focus or diluting management resources.

As in the case of other consumption issues, we began by measuring performance at each of our offices. This enabled us to provide local information to manage a global issue – a critical success factor in changing consumption patterns. We are now working with stationery suppliers to manage down use of paper, as well as with our ICT colleagues to understand how technology could help us. This will be a longer process, and will take some time to roll out throughout the firm.

Staff awareness

The induction course

All permanent staff who join KPMG UK start their career with a two-day induction course covering orientation and introduction to the culture of the firm, followed by an introduction to the IT tools with which the firm operates. Since our environmental policy went live across the UK, all staff have had environmental management as part of the core curriculum on day one of their career with the firm. This key session underlines the firm's commitment to environmental management and outlines in a simple way how staff may contribute to environmental performance. For example, simply using ten sheets of paper less per day, rather than business as usual, would mean that 6000 trees continued to stand at the end of the year. This and other simple examples show that you truly can "think global and act local" making a real difference.

Environmental coordinators

A central team provides guidance for all functions and disciplines across the firm. Supporting their endeavours (and the real implementers of change) is the network of environmental coordinators to be found in each office across the UK. These volunteers act as a catalyst for change within their local office-based environment. For some, this means a focus on waste and consumption issues; business travel is the imperative for others. By training each environmental coordinator and furnishing tool kits to support their endeavours, highly effective local change agents have been established. A broad diversity of programmes are

now running, covering everything from paper reduction to bicycle usage.

These programmes support and reinforce the structural changes taking place in the firm. Local coordinators will manage and measure such areas. Paper consumption and use posters inform staff why these changes are important and how they can help. They explain in simple clear ways what we use and how we can use less. This works not just for paper consumption, but for travel as well.

By giving staff this type of detail, we encourage change at local level – closing the loop on structural change and policy ambitions. An example of how this works in practice is the "Watford Wheels" project, shortly to become "Cambridge, Milton Keynes and Ipswich Wheels" as well.

Increasingly, the types of projects and programmes introduced at office level have a triple bottom line impact. Engagement with local community groups brings with it an improvement in the level of community investment being made by the firm, together with environmental improvements and very often economic benefits as well. It is difficult to quantify the economic benefits of employees' pride in the organization for which they work. However, there is empirical evidence within the firm (based on direct feedback from staff volunteers), together with sufficient external research, to reassure us of strong staff support for our environmental policy and performance.

Environmental and social reporting

Reporting is good discipline for business. It aids transparency, is a driver of underlying performance, and acts as a mechanism to allow senior management to monitor progress against goals. A voluntary reporting regime is the optimum. However, as we have seen with the reporting of environmental issues, purely voluntary arrangements have not been sufficient to encourage change. And without some common framework, a plethora of standards develop that frustrate integration with core business processes and management systems.

As an integral part of KPMG's Annual Report in the UK, we produce a social and environmental report using indicators for greenhouse gas emissions, water and waste developed by the Department of Environment, Food and Rural Affairs (DEFRA), the UK Government Ministry responsible for this area. These indicators were developed in conjunction with business to report the most significant environmental impacts. We also use the London Benchmarking Group Model for reporting charitable gifts. These measures allow others to assess our performance. They also aid comparison with our peers.

KPMG UK Environmental Policy

We are committed to integrating environmental best practice into all of our business activities. We will work towards this through a programme of continuous improvement throughout all of our operations.

This means that:

- We will adopt best practice and play a leading role in developing innovative solutions to environmental issues facing our sector.
- We will conduct our activities in full knowledge of and compliance with environmental regulations.
- We will integrate environmental considerations and objectives into all our business decisions.
- We will minimize consumption of natural resources and wastage of materials as far as economically practicable.
- We will establish environmental objectives and targets and measure performance against them.
- We will encourage awareness and commitment to improved environmental performance amongst our people, our suppliers and our clients.
- We will encourage our clients to think about how their businesses affect the environment and, throughout our business, will provide professional advice that is consistent with this aim.
- We will carry out reviews of our environmental performance and publish the results.

Practising what we preach

Besides developing our own environmental management systems, KPMG provides social and environmental advisory services to other companies, using some of the lessons learned in the development of our own systems and advising clients. KPMG's Sustainability Advisory Services came into being in 1998 with an innovative alliance with The Body Shop International. While KPMG had an existing Environmental Unit, this decision reflected growing awareness that a successful business should manage its impacts in an integrated way.

The "Watford Wheels" project

We have recently set up the "Watford Wheels" project to encourage bicycling to and from the office and at lunchtimes. This is a community-based project in partnership with the Hertfordshire Care Trust charity.

Bicycling is a good way to keep fit. It can reduce the risk of heart disease, and is faster than sitting in a car in traffic. There are environmental benefits, too, as bicycling instead of using a car results in less pollution and road congestion.

Young people and community volunteers repair and build bikes provided free of charge by the police, local waste sites and the local community. These bikes are freely available for staff use. The charity provides regular servicing each month.

Changing and showering facilities are also available for the use of bicyclists.

Three years on, we have become one of the leading suppliers of non-financial reporting and assurance services, bringing a strategic, business-focused view to environmental and social management. By applying our solutions to ourselves, we gain an interesting insight into the challenges our clients face in bringing sustainable development to the heart of their businesses. We believe that leading by example – practising what we preach – adds credibility to our client services in these areas.

Conclusions

Environmental management is strongly supported by KPMG's senior management. It is acknowledged that this is only one step on the road to sustainable development – which will bring greater challenges with a much more consciously competent work force and increasingly questioning client base.

For KPMG, the journey to environmental sustainability has begun. This is reflected by our staff, who take pride in the values of the firm; by our clients, who increasingly ask about our performance as well as our environmental policy; and by our bottom line performance. Good environmental management is a reflection of good business management.

KPMG is the first professional advisory firm to have an environmental policy that is publicly accessible. It is committed to reporting its environmental performance and to continuing its improvements. If you would like to find out more about KPMG, please e-mail *environment@KPMG.co.uk* or see our website (*www.kpmg.co.uk*). We will be pleased to hear from you. ◆

Biogas technology in India: does it have a future?

Sudhirendar Sharma, Editor, *Rural Energy Journal*, Energy Environment Group, 7 Triveni, 7/8 Paschim Vihar, New Delhi 110063, India
(sudhirendar@vsnl.net)

Summary

When India's ambitious National Project on Biogas Development was launched in 1974, it was hailed as an archetypal appropriate technology. However, about three-quarters of a projected 12 million family-sized biogas plants have not been built. Biogas technology has failed to capitalize on the full potential of the large volume of cattle dung available in India. Reasons for this failure are examined, and proposals for revitalizing the project are made.

Résumé

Lors de son lancement en 1974, l'ambitieux Projet national indien pour le développement du biogaz avait été salué comme l'archetype de la technologie la plus appropriée. Or, sur les 12 millions de méthaniseurs domestiques prévus, près des trois quarts n'ont toujours pas été fabriqués. La technologie du biogaz n'a pas su exploiter à fond le potentiel offert par le volume considérable de déjections de bovins produit en Inde. L'article s'interroge sur les raisons de cet échec et propose des solutions pour relancer le projet.

Resumen

Cuando en 1974 se lanzo el ambicioso Proyecto Nacional sobre Desarrollo de Biogas en la India, fue aclamado como un arquetipo de la tecnologia adecuada. Sin embargo, aún no se han construido tres cuartas partes de las 12 millones de fábricas familiares de biogas. La tecnologia del biogas no logro aprovechar al maximo el potencial de la gran cantidad de estiercol de ganado disponible en la India. Se estudian aqui las razones de este fracaso y se hacen propuestas para revitalizar el proyecto.

India's biogas technology quest dates back to 1897, when the Matunga Leper Home in Mumbai (formerly Bombay) began using human waste to generate gas to meet its lighting needs. From 1907, the home used biogas-produced electricity for cooking and to power a generator. This system operated until 1920. It appears that once the home was connected to the city's sewerage system, no more waste was available for biomethanation.

Subsequent research relating to biogas technology included work by the Khadi & Village Industries Commission (KVIC), a government-sponsored umbrella organization for rural industrialization engaged in developing efficient new models for generating biogas from biodegradable waste. Researchers at the Indian Agricultural Research Institute (IARI) in Delhi focused on the development of an efficient system for anaerobic digestion of cattle dung. Thanks to such research efforts, several biogas digester models were in existence by 1950. The most notable was Grama Laxmi III, the prototype of the later KVIC floating dome model. Following the success of this design, KVIC began field implementation in 1961 and some 6000 biogas plants were constructed over a period of 13 years.

The biogas dissemination programme received a real fillip in 1973 when E.F. Schumacher, doyen of the appropriate technology movement and then an adviser to the Government of India, noticed the biogas plants when travelling from Benares to Allahabad (Uttar Pradesh) and mentioned them to the Prime Minister, Indira Gandhi. At this time increasing petroleum prices had begun to affect the Indian economy, while deforestation was starting to be perceived as a serious ecological concern. In her 1974 Independence Day address to the nation, Mrs. Ghandi promised that solutions to both problems were in sight. It was she who inspired the creation of the National Project on Biogas Development (NPBD).

The biogas development project

Between 1974 and 1981, the Government initiated a field dissemination programme to test the performance of biogas under different ecological conditions. Based on feedback from such demonstrations, in 1981 the Ministry of Agriculture launched the biogas development project with an outlay of US$ 10 million. After a few months the project was transferred to the newly created Department of Non-conventional Energy Sources.

The project began by concentrating on 100 selected districts. A modest target of 400,000 new biogas plants was set for the period of the 6th Five-Year Plan. To ensure that both KVIC (floating) and Janata (fixed dome) models were installed during this period, equal emphasis was placed on the two models.

Before this ambitious programme for converting cattle dung into biogas began, studies were conducted to estimate biogas technology's true potential in India. Based on the 1961 livestock census, it was estimated that biogas could generate nearly 195 billion kWh of energy annually, equivalent to 24 billion litres of kerosene and 226 million tonnes of manure with a nitrogen content of 3.5 metric tonnes. A total potential of 18.72 million family-sized biogas plants (1.7 m³ average capacity) and 560,000 community plants (14.7 m³ average capacity) was calculated based on projections of the amounts of dung available. The potential number of family-sized plants was later reduced to 12 million. Interestingly, the cattle census has not been taken since nor have figures on biogas technology's potential been revised to account for socio-economic and other changes in rural India.

Initial success in biogas dissemination encouraged the government to set ambitious targets for subsequent Plan periods. The 7th Five-Year Plan included the target of installing 1.5 million biogas plants, expanding the project to cover all districts in the country. However, only 890,000 plants were constructed. During the period of the 8th Five Year Plan, 960,000 plants were constructed. The 9th Five-Year Plan (1997–2002) aims at construction of some 1.2 million family-sized biogas plants. Despite ambitious targets, only about 3 million biogas plants had been constructed up to March 2000, nearly 20 years after this country-wide project was first launched. Given the current pace of biogas dissemination, it could be several more years before the remaining 75% of India's estimated biogas production potential is realized.

India's approach to disseminating biogas technology

The approach to disseminating biogas technology adopted in India has been subsidy driven. Until mid 1990, the entire project was subsidized. This meant the total cost of constructing each biogas plant was borne by the State. To meet the higher costs in mountainous, desert and tribal areas, larger subsidies were provided. Although construction costs vary from one location to another, a family-sized biogas plant with 2 m³ capacity costs around US$ 133–155. From 1990, the government reduced the subsidy component with the idea that families who would benefit from having a biogas plant in their courtyard should contribute to its

cost. Despite the subsidy reduction, families still contribute only around US$ 55-77 per plant.

India's bureaucratic structure ensures the dissemination of renewable technologies (including biogas) to rural areas. Based on performance in previous years and the target for the Plan period, a yearly target is established. Each state is assigned a target and given a budget allocation. The project's implementation machinery functions at three levels: the centralized control level, where targets are allocated and subsidies are provided; the non-governmental services delivery channel, which ensures community participation and implementation at the local level; and research back-up institutions, whose work is meant to improve the biogas system's efficiency. Each implementing agency, whether governmental or non-governmental, receives payment (a "turnkey fee") for ensuring that the plant functions at capacity during the first three years.

Despite the well laid out mechanism for biogas dissemination, the performance of India's biogas project has been dismal. According to an evaluation study for the period 1985-1990 carried out by the National Council of Applied Economic Research (NCAER), only 45% of commissioned biogas plants were operating in the states of Rajasthan and Uttar Pradesh. This compares to a national average of 77%. The study further reported that in the same period some 1.84 million installed biogas plants were not functioning. The situation has not changed much since.

No information is available on whether all the functioning plants are producing gas at their designed capacity. Neither is there firm evidence that all the slurry produced is being utilized as fertilizer. Consequently, estimates with respect to fuelwood savings and soil enrichment are far from being realized.

The National Project on Biogas Development has failed to live up to its potential. A technology that promised good results according to an environmental and rural energy scenario has yet to capture the imagination of those to whom it is targeted. It is not as if the reasons for the project's poor performance were not (or are not) known to the government. But serious efforts have not been made to address them.

What went wrong?

It is difficult to imagine how a carefully structured, environmentally friendly, community-oriented rural energy project could fail to deliver the promised end product. Tragically, this is exactly what has happened. In the absence of an internal mechanism for repairing and overhauling, confusion has been compounded over the years. There are significant lessons to be learned by countries that plan to follow in India's footsteps and create a biogas programme.

In the haste to spread the technology of anaerobic methanation to every nook and corner of the country, socio-economic and ecological factors were not properly assessed. On the contrary, the programme was spread over India's diverse agro-climatic zones, leading to dilution and inefficient use of resources. For instance, while the state of Maharashtra has constructed over 400,000 biogas plants, the neighbouring small state of Goa has installed fewer than 2000. Nevertheless, support structures are virtually the same in the two states.

Feedback on operational problems relating to the operation of biogas plants was not adequately addressed, with the result that the fixed-dome Deenbandhu model (an improvement over the Janata model) became the lone surviving design. It is noteworthy that this model did not come from the NPBD research network. End-users did not have a choice of design options.

On the operational side, the main stumbling block is obtaining the dung required for initial charging. Charging a 2 m^3 plant requires at least 30 quintals of dung. Households often find it difficult to collect this much dung and/or to wait during a hydraulic retention time of 42-52 days for the gas to be generated. Research on alternative feedstocks, such as crop wastes, weeds and other biodegradable municipal wastes, has not gone beyond laboratory studies.

Due to the biogas project's poor performance and slow progress, the interest shown by renewable energy specialists and bureaucrats has been decreasing. Centralization, bureaucratic control and poorly performing state nodal agencies are responsible for the unsatisfactory level of dissemination of this environmentally friendly technology. And while subsidization is being phased out, there has been no reduction of the project's overhead.

Does biogas technology have a future in India?

India's biogas project has a future only if the authorities concerned wake up to the realities of what has virtually ruined it, perhaps beyond easy repair. The project could be brought back to life with the following radical interventions:

- Based on the cumulative performance of biogas plants over the last two decades, districts/regions need to be selected where the biogas project will be vigorously pursued. Essentially, this ought to mean phasing out areas where plants have performed below satisfaction.
- Operational and technical glitches should be addressed by diverting surplus funds to research and development (following phasing out of the programme in some areas).
- Investments should be made in design research to make biogas suitable to different climatic conditions. Models need to be developed that take into account local problems such as low temperatures, less availability of water, alternate feeding materials and proper feedstock mix.
- Biomass based batch-fed biogas systems, kitchen waste biogas plants and human excreta based biogas systems (developed in the non-governmental sector) need proper incentives and encouragement for government dissemination under the ongoing project.
- The National Project on Biogas Development must reorient itself to accommodate developments in the sector and provide new designs for speedy implementation. Currently it takes years for a new design to be approved by the government.
- The total biogas potential should be reassessed, not only by recalculating the potential volume of dung which could be used but also the human excreta and degradable biomass available in the country. Most municipalities are struggling with solid waste disposal problems.
- The project should be made attractive enough to interest private investors. In Nepal, for instance, private investors have successfully disseminated this technology in the rural foothills. (Nepal's biogas programme is based on the Indian experience.)
- The National Project on Biogas Development should be de-bureaucratized.

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World News

New study assesses countries' "wellbeing"

Thirty-seven countries are close to striking a good balance between a healthy population and a healthy environment, according to the latest *Wellbeing of Nations* report from IUCN–The World Conservation Union. However, even these 37 countries must greatly improve their environmental efforts to completely achieve this balance.

The Wellbeing of Nations ranks a total of 180 countries by measuring human development and environmental conservation. Every country with a high standard of living is putting undue pressures on the environment. Sweden is the survey's best performer. It earned the top ranking even though it is an "ecosystem deficit" country – that is, its advanced standard of living has been achieved at a cost to the environment. Germany ranks 12th, Australia 18th, Japan 24th and the United States 27th. Several developing and economic-transition countries are among the top 37.

Achim Steiner (Director General of the IUCN) says *The Wellbeing of Nations* "suggests that a high standard of living is possible without ruining the environment by changing the way that development is pursued. The report therefore sends a clear message to the World Summit on Sustainable Development, to be held in Johannesburg next year. All countries need to recommit themselves to sustainable development and find practical ways to combine human development with the protection of ecosystems."

"The key conditions for combining high human wellbeing and low ecosystem stress are freedom, good governance and education," emphasizes Robert Prescott-Allen, who wrote the report.

The method used in the survey, developed with the support of IDRC (Canada's International Development Research Centre), gives equal weight to people and the environment, covering a wider scope of human and ecological factors than more traditional yardsticks such as GDP, the Human Development Index of the UN Development Programme (UNDP), or the Environmental Sustainability Index developed by the World Economic Forum and environmental units from Yale and Columbia Universities.

The Wellbeing of Nations was published in October by the IDRC and Island Press in cooperation with IUCN–The World Conservation Union, the International Institute for Environment and Development, the UN Food and Agriculture Organization (FAO), Map Maker Ltd., and UNEP's World Conservation Monitoring Centre.

For more information, contact: Nancy MacPherson, IUCN–The World Conservation Union, Rue Mauverney 28, 1196 Gland, Switzerland. Tel: +41 22 999 0271, Fax: +41 22 999 0025, E-mail: nancy.macpherson@iucn.org, Internet: www.iucn.org.

To order the report, contact: Island Press, PO Box 7, Covelo, California, USA: Tel: +1 800 828 1302, +1 707 983 6432, Fax: +1 707 983 6414, E-mail: service@islandpress.org, Internet: www.islandpress.org, or The Eurospan Group, 3 Henrietta Street, London WC2E 8LU, UK. Tel: +44 20 7240 0856, Fax: +44 20 7379 0609, E-mail: info@eurospan.co.uk, Internet: www.eurospan.co.uk. ◆

Countries ranked by Wellbeing Index

The top 37 countries in the Wellbeing of Nations survey are those with a "Wellbeing Index" (WI) above 50. The WI is the average of the Human Wellbeing Index (HWI) and the Ecosystem Wellbeing Index (EWI). Sustainability would be represented by an average of 81 or more. Countries in *italics* were rated on fewer than two-thirds of the human or ecosystem indicator groups used by the IUCN.

		WI	HWI	EWI
1	Sweden	64.0	79	49
2	Finland	62.5	81	44
3	Norway	62.5	82	43
4	Iceland	61.5	80	43
5	Austria	61.0	80	42
6	*Dominica*	60.5	56	65
7=	Canada	60.5	78	43
7=	Switzerland	60.5	78	43
9	Belize	57.0	50	64
10	Guyana	57.0	51	63
11	Uruguay	56.5	61	52
12	Germany	56.5	77	36
13	Denmark	56.0	81	31
14	New Zealand	55.5	73	38
15	Suriname	55.0	52	58
16	Latvia	54.0	62	46
17	Ireland	54.0	76	32
18	Australia	53.5	79	28
19	Peru	53.0	44	62
20	Slovenia	53.0	71	35
21	*St Kitts & Nevis*	52.5	52	53
22	Lithuania	52.5	61	44
23	Cyprus	52.5	67	38
24	Japan	52.5	80	25
25	*St Lucia*	52.0	53	51
26	*Grenada*	52.0	55	49
27	United States	52.0	73	31
28	Italy	52.0	74	30
29	France	52.0	75	29
30=	Czech Republic	51.5	70	33
30=	Greece	51.5	70	33
32	Portugal	51.5	72	31
33	United Kingdom	51.5	73	30
34	Belgium	51.5	80	23
35	Botswana	51.0	34	68
36	Slovakia	50.5	61	40
37	Luxembourg	50.5	77	24

UN Population Fund report warns of environmental pressures

Expanding populations, increasing demand for consumer goods, and persistent poverty are putting unprecedented pressures on ecosystems and infrastructure in developing countries that are already in desperate straits, according to *Footprints and Milestones: Population and Environmental Change*, the latest State of the World Population report from the UN Population Fund (UNFPA).

Released in November, this report analyzes international agreements of the past decade and the impacts of human activity on the planet. Unbalanced consumption is devastating the environment, and environmental destruction has a disproportionate impact on the poor. Confirming indications over the past decade, the report says universal education and health care – and movement towards gender equality – are essential for a sustainable environment and sustainable development.

Footprints and Milestones recommends far greater support to women in developing countries. These women need help to protect the natural resources on which they largely depend and to improve their health and education, which will lead to smaller, healthier families.

The UNFPA report notes that in the last 70 years the world population has tripled, while water use has increased six-fold. This echoes concerns expressed during the Stockholm Water Symposium earlier in the year, at which over a thousand water experts focused on the implications of population forecasts. A new International Water Management Institute study says that by 2025 about 2.7 billion people – nearly one-third of the projected global population – will live in regions facing severe water scarcity. Asia and Sub-Saharan Africa, which have some of the most heavily populated and poorest regions, are expected to be most affected.

Footprints and Milestones also makes the point that world population has quadrupled in the last century, whereas CO_2 emissions have increased twelve-fold. As scientists reported at the time of the November Kyoto Protocol negotiations, *[illegible]*

article below), climate change due to growth in emissions of CO_2 and other greenhouse gases is likely to depress harvests of key food crops by as much as one-third in the very regions most likely to undergo the highest population growth.

The UNFPA report also says vital rainforests are being destroyed at the highest rate in history, and with them crucial sources of biodiversity. Rainforest disappearance contributes to global warming and to already rising sea levels.

Poverty, precarious land tenure, and lack of expert support discourage investments in newer technologies or more sustainable practices such as crop rotation, letting land lie fallow, or reforestation. Instead, these conditions encourage clearing of woodlands for fuel and short-term income, as well as cultivation of fast-growing cash crops such as cotton, which quickly exhausts the land. Many women are stuck in a vicious spiral of environmental degradation, poverty, high fertility, poor health and limited opportunities.

The global population is growing by 75 million people a year. Nearly all this growth is occurring in the countries least equipped to deal with it. The population of the least developed countries is projected to increase from 668 million currently to 1.86 billion by 2050. "By 2050, 4.2 billion people (over 45% of the global total) will be living in countries that cannot meet the daily requirement of 50 litres of water per person to meet basic needs," the report says. Meanwhile, water is being used and polluted at catastrophic rates.

Some 54% of available global fresh water supply is being used annually – two-thirds of it for agriculture. This figure will climb to 70% by 2025, based solely on population growth, or to 90% if developing country consumption reaches the levels of the developed world.

For more information on the UNFPA report, contact: William A. Ryan, United Nations Population Fund, 220 East 42nd Street, New York, NY 10017, USA. Tel: +1 212 297 5279. Fax: +1 212 557 6416. E-mail: ryanw@unfpa.org; or Abubakar Dungus. Tel: +1 212 297 5031. E-mail: dungus@unfpa.org. Internet: www.unfpa.org.

For more information on the water study, contact: International Water Management Institute, PO Box 2075, Colombo, Sri Lanka. Tel: +94 1 867 404. Fax: +94 1 866 854. E-mail: iwmi@cgiar.org. Internet: www.cgiar.org/iwmi. ◆

France bans class of pesticides, will also ban fungicide

France has ordered atrazine and related pesticides withdrawn from the market as of 30 September 2002. The French Agriculture Ministry says chemicals in this class (called triazines) are accumulating in the water supply and could threaten human health. In recent years, French authorities have banned drinking of tap water in areas where triazine content exceeds recommended levels.

While French food safety officials have found no risk of cancer associated with the chemicals, the Ministry has recommended that water with atrazine levels above certain thresholds should not be consumed. The French Environment Institute (IFEN) has found degraded atrazine products in 50% of surface water samples and 52% of samples from groundwater.

The Agriculture Ministry has also announced that it plans to ban sodium arsenite, a fungicide used on grapevines, because of risks to human health and the environment. Studies have indicated that sodium arsenite could be related to increased risk of testicular cancer.

For more information, contact: Ministère de l'Agriculture et de la Pêche, 78 rue de Varenne, 75349 Paris 07 SP, France. Tel: +33 1 49 55 49 55. Internet: www.agriculture.gouv.fr; or IFEN, 61 boulevard Alexandre Martin, 45058 Orleans Cedex 1, France. Tel: +33 2 38 79 78 78. Fax: +33 2 38 79 78 70. E-mail: ifen@ifen.fr. Internet: www.ifen.fr. ◆

Greenpeace ships obsolete POPs out of Nepal

Greenpeace activists shipped a stockpile of highly toxic obsolete pesticides from Nepal back to their countries of origin in October. The organization wants to bring pressure on pesticide manufacturers to remove such substances themselves, and to ensure that they are disposed of safely. The pesticides were abandoned in Nepal after they had reached their expiry date or had been banned.

A dozen activists from India, Germany and the UK, together with Nepalese agricultural technicians, spent over two weeks clearing a warehouse of obsolete pesticides, including a thick layer that had built up on the floor. According to Greenpeace, the most dangerous substances found at the site, on the outskirts of Kathmandu, have been banned in the European Union since 1988. These substances, which include banned pesticides such as dieldrin, chlorinated organomercury compounds and DDT, were sent to Nepal some 20 years ago. All were donated or channelled through international aid mechanisms.

Greenpeace is calling for a comprehensive global inventory of all obsolete pesticides. It wants manufacturers and suppliers of the pesticides to take full logistical, technical and financial responsibility for all such stockpiles around the world. It is also calling on companies to ensure these obsolete pesticides are disposed of safely, according to the previsions of the recent global Stockholm Convention on POPs.

Nepal was one of many hot spots Greenpeace reported on in 1998 at the first meeting of the International Negotiating Committee to establish the POPs Convention.

For more information, contact: Andreas Bernstorff, Greenpeace International, Keizersgracht 176, 1016 DW Amsterdam, The Netherlands. Tel: +31 20 523 6222. Fax: +31 20 523 6200. Internet: www.greenpeace.org. ◆

Industry Updates

GHG "Climate Savers" pledges

Through the Climate Savers programme, the Worldwide Fund for Nature (WWF) and the Center for Energy & Climate Solutions are working with companies to pursue practical activities that reduce emissions and achieve energy efficiency goals.

Nike Inc. has agreed to a "Climate Savers" memorandum of understanding with WWF and the centre to reduce greenhouse gas emissions from its operations worldwide. Under this agreement, Nike is establishing targets such as a 13% reduction of CO_2 emissions by the end of 2005 (based on 1998 figures). Nike also says it will measure GHG emissions from its suppliers and shippers and try to get these reduced.

Shell Chemicals Canada has begun selling over 60% of the excess CO_2 at its Scotford, Alberta, plant to neighbouring Air Liquide, which processes gas used in soft drink carbonation. Shell previously vented this CO_2 to the atmosphere. It says it will eventually sell 62,000 tonnes of CO_2 per year to Air Liquide.

Shell Chemicals is also working to reduce CO_2 emissions in the Netherlands by supplying 40,000 tonnes of gas a year from a Dutch plant to the Swiss company Omya to produce calcium carbonate, used in whitening paper. A company press release says The Royal Dutch Shell Group emits about 100 million tonnes of CO_2 worldwide, a reduction of 22 million tonnes since 1990.

Canadian aluminium producer Alcan Inc. has pledged to reduce its GHG emissions, starting with a target of a 500,000 tonne cut between 2001 and 2004. Alcan says it has already reduced these emissions by over 2 million tonnes since 1990, through changes at its smelters and recycling and fabrication plants.

For more information, contact: Worldwide Fund for Nature (WWF), Climate Savers, US, Rebecca Eaton, Tel: +1 202 822 3465; Europe, Andrew Kerr, Tel: +31 6 5161 9462, or Stephan Singer, Tel: +32 2 743 8800; Japan, Yurika Ayukawa, Tel: +81 3 3769 1711, Internet: www.panda.org/climate/savers.cfm.

Other contacts: www.nike.com, Shell Chemicals Canada Ltd., Fort Saskatchewan, AB T8L 1A1, Canada, Tel: +1 780 992 1235, E-mail: miriam.g.corolan@opc.shell.com, Internet: www.shellchemicals.com; Marc Osborne, Alcan, Tel: +1 514 848 1342, Internet: www.alcan.com. ◆

Electronics industry organizations support transition to environmentally sound products

Several trade associations in the electronics industry have created a group to accelerate use of lead-free solder and other environmentally sound techniques in advance of expected new standards in the European Union and elsewhere.

The Global Environmental Coordination Initiative (GECI) is administered by the High Density Packaging User Group (HDPUG), a trade organization whose members are companies involved in the supply chain that produces products using high-density electronic packages—from component suppliers to sub-assemblers and brand name electronics firms.

GECI will "channel the worldwide resources of electronics organizations and the companies they represent with the common goal of easing industry's transition to lead-free manufacturing," said Ruben Bergman, Executive Director of HDPUG and Chairman of GECI. "By working toward standardized solutions, we can make it easier for companies to implement lead-free manufacturing processes, reducing both time and risk involved in this kind of industry-wide conversion. GECI will develop a global transition plan and share the up-front work needed to facilitate a transition. We will also work to help companies comply with environmental, market and legislative requirements."

The organizations taking part in the initiative so far, besides HDPUG, are the IPC—Association Connecting Electronics Industries, the JEDEC Solid State Technology Association, the Microelectronics Packaging and Test Engineering Council, the National Electronics Manufacturing Initiative, the Semiconductor Assembly Council, Semiconductor Equipment and Materials International, Soldertec of the UK, and the Industry Technology Research Institute of Taiwan.

GECI's initial mission consists of agreeing on a voluntary plan for replacing tin-and-lead solder with a lead-free alloy, with no more than two alloys agreed on for most applications; identifying key standards that will need to be developed or modified, such as design, performance and test standards; and facilitating global cooperation to make the transition as smooth and cost-effective as possible.

The group's goal is for half of all manufacturing in major electronics sectors to be lead-free by the end of 2003, in less than half the time allowed by a proposed European Union phase-out. Draft EU legislation would ban hazardous substances in electrical and electronic equipment by around 2007. GECI's target dates for lead are the end of 2001 for consumer electronics and mobile telephones, 2002 for portable computers, and 2003 for desktop computers.

Later, GECI plans to carry out a similar project to replace halides in products such as flame retardants, another target of the EU legislation. "Resolving the lead-free issue has the first priority because of the significant impact this change will have on the electronics infrastructure," said Bergman. "However, I also expect topics such as the environmental load analysis of potential technologies, design for the environment and end-of-life treatment of electronics will need to be addressed."

For more information, contact: HDP User Group International, Langbrodalsvagen 73, S-12537 Alvsjo, Sweden, Tel/Fax: +46 8 86 98 68, E-mail: ruben.bergman@hdpug.se, Internet: www.hdpug.org. ◆

UNEP Focus

Marrakesh: warnings on risks to world food crops

Harvests of some of the world's most important staple food crops may fall as much as one-third in some crucial regions as a result of climate change. During the latest round of climate change negotiations in Marrakesh, Morocco, Klaus Toepfer (Executive Director of UNEP) underlined the importance of recent studies concerning the agricultural impacts of global warming.

While global population growth is making it more urgent than ever to increase yields, researchers at the International Rice Research Institute (IRRI) in Manila cite evidence that rising temperatures linked with greenhouse gas emissions can impair crops' ability to flower and set seed. For every 1°C rise in temperature in regions like the tropics, yields of staples such as rice, maize and wheat could tumble as much as 10%. The Intergovernmental Panel on Climate Change (IPPC) has estimated that average global temperatures in the tropics could climb by as much as 3°C by 2100. IRRI scientists say their initial estimates show yields in the tropics falling up to 30% as early as 2050.

After two weeks of tough bargaining, negotiators at the Marrakesh conference (COP 7) agreed on the operational details of the Kyoto Protocol to the UN Framework Convention on Climate Change (UNFCCC). Approval of these rules paves the way for ratification by governments. Michael Cutajar, Executive Secretary of the UNFCCC, expressed his hope that, with these rules in place, it could be ratified in time for the World Summit on Sustainable Development in Johannesburg next September. He predicted the Protocol will be ratified by enough countries to bring it into force.

UN Secretary-General Kofi Annan, in a message read to the conference, called the Kyoto process "a victory for multilateralism" and said that "joining forces against global threats to human society and the planet has never been more important."

Despite initial opposition by the European Union, the results of the Marrakesh negotiations give countries the right to lower their emissions target by counting carbon stored in managed forests and farmlands. A maximum amount of carbon to be so counted is designated for each country. The main beneficiaries of this agreement are Canada, Japan and Russia. However, in a report published in the journal *Nature* a team of 30 experts say carbon sinks cannot be relied on indefinitely as their ability to soak up CO_2 will decrease over time. "The net global terrestrial carbon sink may disappear altogether in the future," said David Schimel of the Max Planck Institute for Biochemistry in Germany. Will Steffen, Executive Director of the International Geosphere-Biosphere Programme, explained that as forests mature, their CO_2 absorption becomes less effective.

Also at the Marrakesh conference, GRID-Arendal (the UNEP collaborative centre based in Norway) warned that key cash crops such as coffee and tea in some major growing regions will be vulnerable to global warming in coming decades. If farmers are forced to try to grow these crops in higher, cooler mountainous areas, this will intensify pressures on sensitive forests, threaten wildlife, and put both the quality and quantity of water supplies at risk.

Mr. Toepfer told negotiators: "Billions of people across the tropics depend on crops such as rice, maize and wheat for their very survival. These new findings indicate that large numbers are facing acute hunger and malnutrition unless the world acts to reduce emissions of carbon dioxide and other greenhouse gases. A similar threat to cash crops is also emerging in areas such as East Africa. Poor farmers here face declining yields and incomes in the traditional coffee and tea growing areas, pushing them into even more biting poverty."

IRRI research was led by John Sheehy, a crop ecologist, who acknowledged that there are "still great uncertainties". Nevertheless, many food crops grown in the tropics are already at or near their thermal limits. IRRI is part of the Consultative Group on International Agricultural Research, with which UNEP works on issues such as agroforestry. IRRI scientists are launching an effort they call the Global Challenge Programme to chart more precisely the likely effects of climate change on a wide range of crops. Dr. Sheehy emphasized that the IRRI forecasts had taken no account of other potentially damaging developments related to global warming, such as higher numbers of agricultural pests, vulnerability of pollinating insects and decreased rainfall.

Under scenarios developed by the IPPC, global warming could benefit farming in places like Canada and Siberia. Dr. Sheehy said such gains would probably not be sufficient to offset losses in the tropics, even assuming that food surpluses in one region could be redistributed effectively.

With respect to GRID-Arendal's studies on cash crops such as tea and coffee, its Managing Director, Svien Tveitdal, emphasized that the findings "cover Uganda and Kenya, but they have implications for the Caribbean, Latin America and Asia where coffee and tea are also economically important produce." Impacts on the economies of these countries could be serious. Agriculture earns Kenya an estimated US$ 675 million a year in exports, with US$ 515 million coming from tea and coffee. For Uganda, annual agricultural exports are worth around US$ 434 million, with tea and coffee accounting for US$ 422 million.

GRID-Arendal has internationally recognized expertise in mapping. It has produced graphic illustrations of the extent to which global warming may reduce coffee growing areas. These illustrations are part of a new web-based series of Vital Climate Graphics produced by GRID-Arendal and accessible via UNEP.net's new Climate Change Portal *(see box on this page)*.

Global warming will be responsible for a huge increase in weather-related disasters such as hurricanes in coming decades, representatives of the major insurance companies and banks involved in the UNEP DTIE Finance Initiatives told the conference. A significant increase in the number of floods and hurricanes has already been observed.

The Kyoto Protocol can enter into force only after it is ratified by the governments of at least 55 countries representing 55% of 1990 CO_2 emissions. The EU has said its Member States will ratify it next year. Without the United States – which pulled out in March – it is critical that Russia and Japan ratify the Protocol. If they do not, the Kyoto Protocol will collapse.

UNEP's Climate Change Portal

The latest reports on greenhouse gas emissions show that, despite a small reduction in countries that have been parties to the Kyoto Protocol since 1990, emissions are rising again and will continue to do so in the foreseeable future. World emissions could therefore be well above Kyoto targets by 2010.

This and much more information has been collected on the new Climate Change Portal at *http://climatechange.unep.net*, UNEP's main gateway to the most up-to-date information on climate change. The portal provides access to newly released or updated information such as:

- greenhouse gas emission graphics showing emissions by country (Annex 1 countries);
- an interactive map service showing national progress towards meeting Kyoto Protocol commitments;
- the latest assessments from the Intergovernmental Panel on Climate Change (IPCC);
- an interactive climate model that allows site visitors to experiment with and learn about climate change;
- easily understandable maps and charts, including an interactive map showing countries' progress towards meeting their Kyoto commitments;
- the most authoritative available information on climate change, categorized for quick reference.

For more information, contact: Aake Bjoerke, GRID-Arendal, Email: bjoerke@grida.no.

For more information, contact: Nick Nuttall, Head of Media Services, UNEP. Tel: +254 2 623084 or +254 733 632755 (cell phone). E-mail: nick.nuttall@unep.org; or Duncan Macintosh, IRRI. Tel: +63 2 845 0563, ext. 725, or +63 918 902 5034 (cell phone). E-mail: d.macintosh@cgiar.org; or John Sheehy, IRRI. Tel: +63 2 845 0563, ext. 711. E-mail: j.sheehy@cgiar.org. ◆

In related developments:

■ *Greenhouse Gas Market Perspectives: Trade and Investment Implications of the Climate Change Regime* is a new publication from UNCTAD (the UN Conference on Trade and Development). It explores recent issues related to the proper functioning of trading in GHG credits and allowances: the legal and institutional framework for a plurilateral GHG emission trading system; the size of the carbon market and models used to estimate it; the development of post-Kyoto emission trading programmes in Europe; and voluntary participation by developing countries.

For more information, contact: GHG Emissions Trading Project, UNCTAD, Palais des Nations, CH-1211 Geneva, Switzerland. Tel: +41 22 917 5853/5831. Fax: +41 22 907 0274. Internet: www.unctad.org/ghg.

■ Britain's emission trading programme registered its first trade in late September. In a forward deal brokered by Natsource, DuPont sold 10,000 year-2002 GHG emission allowances to MIECO, a unit of Japanese trading company Marubeni Corp. Through the voluntary programme, the first of its type in the world, companies set CO_2 emission reduction targets. The government provides cash incentives if the companies meet these targets. Companies can either reduce their own emissions or buy the right to pollute from companies that have reduced their CO_2 emissions even more than the targeted amount.

■ In Japan, Tohoku Electric Power Co. reached an agreement with Australia's Powercoal and Centennial Coal Co. to buy coal in a package along with GHG emission rights. This is believed to be the first agreement of its kind in Japan.

For more information, contact: Natsource, 140 Broadway, 30th Floor, New York, NY 10005, USA. Tel: +1 212 232 5200. Fax: +1 212 232 5353. Internet: www.natsource.com; or Tohoku Electric Power Co., Inc., 7-1, Ichibancho 3-chome, Aoba-ku, Sendai, Miyagi 980-8550, Japan. Internet: www.tohoku-epco.co.jp. ◆

"Urgent action" needed to protect the marine environment

The world's leading marine scientists have called for "urgent action" to address the most serious problems associated with land-based activities. In a report at the first review meeting of UNEP's Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA), they said the negative effects of land-based activities on seas and coasts are growing in scale and type, and are increasingly damaging to the marine environment.

Warning that "the economic costs of failing to take action to control land-based activities are enormous," the report identified sewage, the physical alteration and destruction of habitat, excessive nutrient inputs, and changes in sediment flows as top priorities for action. The scientists said the root causes of marine environmental damage are poverty, poorly managed social and economic development, and unsustainable consumption patterns.

The report, *Protecting the Oceans from Land-based Activities*, was produced by the UN-sponsored Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) for the first intergovernmental review meeting of the GPA at Montreal in late November. The meeting brought together senior representatives from over 100 governments, various international organizations, global and regional NGOs and the private sector.

"The oceans cover 71% of our planet's surface, regulate its climate and provide its ultimate waste disposal system. And yet our species continues to treat them as our common sewer," said Klaus Toepfer, UNEP Executive Director. "Marine and coastal ecosystems are of vital importance to human well-being. Their value has been estimated at around US$ 13 trillion. This is equal to one-half of annual global GNP. Yet, we continue to treat coasts and oceans as if they were not an important economic resource for developing and developed countries alike."

The GPA calls on countries to develop programmes to protect human health and the environment. Adopted by 108 governments and the European Commission in November 1995, it envisages action to prevent, reduce and control land-based causes of marine environmental degradation such as sewage, heavy metals, persistent organic pollutants (POPs), radioactive substances, oil and other hydrocarbons, litter, nutrients and sediments.

For more information, contact: Robert Bisset, UNEP Spokesperson for Europe and DTIE Press Officer, 39-43 quai Andre-Citroen, 75739 Paris Cedex 15, France. Tel: +33 6 22 72 58 42 (cell phone) or +33 1 44 37 76 13. Fax: +33 1 44 37 14 74. E-mail: robert.bisset@unep.fr. Internet: www.gpa.unep.org/igr. ◆

Environmental and development issues addressed at Doha

The environment, the fight against poverty, and sustainable development aims are closer to the centre of the international trade debate following the fourth Ministerial Conference of the World Trade Organization (WTO), which took place in Doha, Qatar, on 9-14 November. For the first time, trade ministers from over 140 countries have firmly accepted that globalization of trade and reduction of trade barriers must take into account environmental issues and the development needs of some of the world's poorer countries.

Ministers at the Conference also took some first critical steps towards reducing or phasing out "perverse subsidies" in areas such as fisheries. Subsidies amounting to the equivalent of US$ 15 billion a year distort trade, contribute to the decline and in some cases collapse of fish stocks, and have broader impacts on the marine environment.

Klaus Toepfer, UNEP Executive Director, expressed optimism that the new round of trade talks, to be based on the Doha agreements, offered real hope for making trade fairer and more environmentally friendly. "Negotiations on trade and the environment were, until recently, a taboo subject in the WTO. But the Ministerial Declaration issued in Qatar has shown that countries are now willing to address these complex links between trade, need to liberalize trade and the need to protect the world's forests, fisheries, wetlands, wildlife and other precious natural resources."

The Ministerial Declaration states: "We welcome the WTO's continued cooperation with UNEP and other inter-governmental organizations. We encourage efforts to promote cooperation between the WTO and relevant international environmental and developmental organizations, especially in the lead-up to the World Summit on Sustainable Development."

Mr. Toepfer stressed the need to help countries develop the ability to assess the environmental effects of trade and trade policies, a field in which UNEP has substantial experience. The Ministerial Declaration recognizes that such assessments are useful. It also commits countries to negotiate on the relationship between WTO rules and trade obligations contained in multilateral environmental agreements such as the Convention on Biological Diversity and the Convention on International Trade in Endangered Species. Moreover, the Declaration recognizes the importance of helping the least developed countries obtain access to world markets.

The Doha Conference marks the beginning of a new round of trade talks, most of which are to be concluded no later than 1 January 2005.

For more information, contact: Hussein Abaza, Chief, UNEP DTIE Economics and Trade, 11-13, Chemin des Anemones, CH-1219 Châtelaine, Geneva, Switzerland. Tel: +41 22 917 8298. E-mail: hussein.abaza@unep.ch; or Charles Arden-Clarke, UNEP DTIE Economics and Trade. Tel: +41 22 917 8298. E-mail: Charles.Arden-Clarke@unep.ch. ◆

Aarhus Convention comes into force

The Convention on Access to Information, Public Participation in Decision-making and Access

to Justice in Environmental Matters (the Aarhus Convention) came into force at the end of October, three years after it was adopted by 39 countries and the European Community.

The Convention, which recognizes citizens' environmental rights to information, participation and justice, aims to promote greater accountability and openness with respect to environmental matters. Its three main areas of focus, derived from Principle 10 of the 1992 Rio Declaration, are: allowing the public greater access to environmental information held by public authorities; providing an opportunity for people to express their opinions and concerns on environmental matters and ensure that decision-makers take due account of them; and ensuring that the public has access to review procedures when their rights to information and participation have been breached (and, in some cases, to challenge more general violations of environmental law).

UN Secretary-General Kofi Annan called the Aarhus Convention "the most ambitious venture in environmental democracy undertaken under the auspices of the United Nations" and "a remarkable step forward in the development of international law." Stressing that environmental rights were not "a luxury reserved for rich countries", he encouraged the international community to "use next year's World Summit on Sustainable Development to strengthen our commitment to environmental rights – not only in Europe but throughout the world."

UNEP and the UN Economic Commission for Europe are involved in helping implement the Convention, through activities such as training courses in Central and Eastern Europe and Central Asia and the establishment of an Electronic Tools Task Force (one of five task forces supporting the Convention).

The development of UNEP.Net as a global environmental information portal is a practical response to the need for access to data and information on environmental matters.

For more information, contact: Jeremy Wates, Secretary, Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, UN ECE, Environment and Human Settlements Division, Bureau 332, Palais des Nations, CH-1211 Geneva 10, Switzerland. Tel: +41 22 917 2384. Fax: +41 22 907 0107. E-mail: jeremy.wates@unece.org. Internet: www.unece.org/env/pp. ◆

New atlas of coral reefs

The most detailed assessment ever made of the world's coral reefs reveals that these precious marine ecosystems occupy much less of the planet than had previously been assumed. *The World Atlas of Coral Reefs*, prepared by the UNEP World Conservation Monitoring Centre (WCMC), provides a new global estimate of the total extent of coral reefs worldwide: 284,300 square kilometres, an area just half the size of France. Although reefs exist in 101 countries and territories, and are vital for fisheries, coastal protection, tourism and wildlife, they occupy less than one-tenth of 1% of the seabed.

The new atlas contains 84 full-page colour maps, all newly researched and drawn, and over 200 colour photos including some taken from space. It is the first comprehensive assessment of where coral reefs are and what state they are in. The findings give new urgency to efforts to protect and conserve these important habitats, which are under increasing threat from activities such as dynamite and cyanide fishing, pollution and climate change.

The atlas provides reef area estimates for individual countries, along with detailed maps and statistics for all coral reef nations. Indonesia, Australia and the Philippines are the largest reef nations. France comes fourth (its reefs are located in its overseas territories).

"Many coral reefs are under the ownership of the world's wealthiest nations. Between them, Australia, France, the UK and the USA account for over one-quarter of the world's coral reefs – a critical resource in powerful hands," says Mark Spalding, lead author. He notes that previous estimates of coral reef area "have been double or in some cases ten times over what we have now found to be the case." Mr. Spalding emphasizes that "coral reefs are degrading fast in almost every country of the world."

Sometimes called the "rainforests of the oceans", coral reefs host an extraordinary variety of marine plants and animals, probably only about 10% of which have so far been described by scientists. The atlas presents the latest information on coral biodiversity. The most diverse region is centred on the Philippines, Indonesia, Malaysia and Papua New Guinea, with 500 to 600 species of coral in each of these countries. These are also some of the most threatened coral reefs in the world. In Indonesia, 82% of reefs are "at risk" from human activities such as illegal blast fishing.

"Deforestation, urban development and intensive agriculture are now producing vast quantities of sediments and pollutants which are pouring into the sea and rapidly degrading coral reefs in close proximity to many shores," says UNEP Executive Director Klaus Toepfer. "UNEP, as secretariat to the Global Programme of Action for the Protection of the Marine Environment from Land-based Sources, is trying to coordinate an integrated response to this problem." *(see related article on page 77)*

The most important global initiative responding to the challenges documented in the atlas is the International Coral Reef Action Network (ICRAN). UNEP and the WCMC are among the ICRAN partners.

For more information, contact: Robert Bisset, UNEP Spokesperson for Europe and DTIE Press Officer (see above); or UNEP World Conservation Monitoring Centre (WCMC), 219 Huntingdon Road, Cambridge CB3 0DL, UK. Tel: +44 1223 277314. Fax: +44 1223 277136. E-mail: info@unep-wcmc.org. Internet: www.unep-wcmc.org.

For ordering information, contact: University Presses of California, Columbia, & Princeton, Ltd., 1 Oldlands Way, Bognor Regis, West Sussex PO22 9SA, UK. Tel: +44 1243 842165. Fax: +44 1243 842167. E-mail: lois@upcp.demon.co.uk. Internet: www.upress.edu. ◆

Klaus Toepfer will serve second term as UNEP Executive Director

Klaus Toepfer, Executive Director of UNEP, has been re-elected for a second term starting in February 2002. The UN General Assembly, meeting in New York, approved UN Secretary-General Kofi Annan's nomination of Mr. Toepfer.

Mr. Toepfer, who is also an Under Secretary-General of the UN and Director-General of the UN Office at Nairobi, responded: "I am absolutely delighted that the General Assembly has given me its backing for four more years. I must also thank the Secretary-General for his support and belief in me as the right person to take the UN's environmental mandate forward."

Before being elected Executive Director of UNEP on 1 February 1998, Mr. Toepfer held several government positions in Germany, including Federal Minister for the Environment, Nature Conservation and Nuclear Safety.

For more information, contact: Tore J. Brevik, UNEP Spokesman, Tel: +254 2 623292, E-mail: tore.brevik@unep.org.

Inspiration from UN's Nobel Prize

Klaus Toepfer, Executive Director of UNEP, reacting to the news that Secretary-General Kofi Annan and the family of organizations he leads had been awarded the 2001 Nobel Peace Prize, vowed to redouble UNEP's efforts to fight poverty and environmental degradation.

Writing to congratulate him, Mr. Toepfer (who is also an Under-Secretary General of the United Nations) said: "We, in the UN family, are extremely proud to serve you in this great and vital organization." He added that the award "will spur myself and UN staff world-wide to even greater efforts to protect our beautiful blue planet, to fight poverty and release millions from misery. We must work towards a stable environment, in a society based on cooperation and the rule of law, where each one respects the spiritual and cultural values of the other."

For more information, contact: Tore J. Brevik, UNEP Spokesman, Tel: +254 2 623292, E-mail: tore.brevik@unep.org. ◆

Stronger Black Sea protection urged

By 2020, if no extra international efforts are made, increases in economic activity could overwhelm any improvements resulting from the enormous Black Sea Basin Strategic Project. This is the warning scientists have given the UNEP-led Global International Waters Assessment (GIWA) initiative, whose first General Assembly took place on 9 October at the University of Kalmar in Sweden.

The Black Sea's environment, wildlife and people are threatened by chronic overfishing, high pollution levels, the devastating impacts of introduced species, heavy discharges of raw sewage, damaging levels of coastal erosion, and the dumping of sludge and mud dredged from ports, their report said. These preliminary findings, among the first to be presented since the initiative began, came from a regional team affiliated with the GIWA.

The Black Sea Basin Strategic Partnership, a US$ 100 million effort aimed at reducing pollution, overfishing and other pressures on the Black Sea and two of the major rivers that feed it, is just getting under way. The project will include work towards developing a protocol to the Black Sea Convention to reduce levels of phosphorous and nitrogen entering the sea. The Partnership includes the Global Environment Facility, the UN Development Programme, the World Bank, the European Union and UNEP.

For more information, contact: Nick Nuttall, UNEP Media Officer, Tel: +254 2 623084 or +254 733 632755 (cell phone), E-mail: nick.nuttall@unep.org, or see www.giwa.net. ◆

UNEP and China in joint centre and Yangtze effort

UNEP has signed a major agreement with the China State Environmental Protection Administration (SEPA) to establish a Joint Centre for an Environmental Information Network. One of the first projects in which this centre will be involved is an ambitious multi-million dollar effort to reduce the risk of devastating floods on the Yangtze River by restoring thousands of lost lakes and natural drainage systems. The Yangtze project was announced at the time of the signing in Beijing.

"The centre will play a key role in UNEP's third Global Environment Outlook report, due to be published next year, and the project on the Yangtze ecosystem restoration, as well as contributing to the development of Internet databases such as UNEP.Net," said Wang Qiao, the Joint Centre's Director.

One reason for launching the Joint Centre is to use the run-up to the 2008 Beijing Olympic Games as a time to raise the environmental awareness of people in Beijing and throughout China. But above all the centre is a long-term effort, for which the Games are expected to act as a kind of springboard.

The Yangtze project, drawn up by researchers in China and at UNEP, aims to help the river retain more water during heavy and prolonged rains. Some 400 million people live along the Yangtze's banks and basins. Millions were left homeless by severe floods in 1998; thousands were killed and economic losses totalled US$ 31 billion. Studies by UNEP after the floods found that, besides ecosystem changes, siltation had made the Yangtze far more vulnerable to flooding.

The project will restore forests, grasslands and other key habitats of the upper and middle Yangtze in order to reduce the amount of soil washing into the river. Such activities could not only increase the volume of water the Yangtze can hold, but also help fight global warming as more CO_2 from the atmosphere will be absorbed.

The cost of the project's pilot phase, scheduled to begin in December 2001, is estimated at US$ 544,000. The full project is scheduled to begin in May 2003. Its cost is estimated at US$ 10 million.

Other projects expected to be carried out by the Joint Centre include a Millennium Ecosystem Assessment for western China, where the Chinese government plans a major expansion of industry and other economic activity. The Joint Centre will also function as the data centre for UNEP's North West Pacific Regional Seas programme.

For more information, contact: Nick Nuttall (see above). ◆

Johnson wins 2001 Sasakawa Prize

The distinguished environmentalist Huey D. Johnson, known for his pioneering work on protecting and managing natural resources, is the winner of the US$ 200,000 UNEP Sasakawa Environment Prize for 2001. Mr. Johnson has helped spearhead green management plans (both nationally and internationally) to save water, reduce energy use and cut pollution.

Mr. Johnson has been "a catalyst and a champion for environmental protection for more than 40 years," said Lord Clinton-Davis, chairman of the selection committee. "His contributions richly deserve to be recognized." As Secretary of Natural Resources in California in the early 1980s, Mr. Johnson crafted statewide programmes and policies for the preservation of natural resources, such as water, forestry and soil, that have been emulated internationally. He has worked in the corporate, non-governmental and governmental sectors and was pivotal in the 1972 founding of the Trust for Public Land (TPL), whose aim is to save open spaces in America's urban centres.

Huey D. Johnson

In 1985, Mr. Johnson founded the Resource Renewal Institute (RRI), an NGO whose mission is to catalyze the development of green plans nationally and internationally. He has also been involved in the development and support of many international organizations promoting environmental protection and productive information exchange and is the founder of Green Belt Movement International (GBMI), whose aim is to promote citizen-based tree planting worldwide.

The UNEP Sasakawa Environment Prize, sponsored by The Nippon Foundation and founded by Ryoichi Sasakawa, has been awarded annually since 1984 to individuals who have made outstanding global contributions to the management and protection of the environment. Winners are selected by an independent panel of distinguished international leaders and environmentalists. It is considered one of the world's most prestigious environmental awards.

For more information (and to obtain 2002 nomination forms), contact: Elisabeth Guilbaud-Cox, Secretary, UNEP Sasakawa Environment Prize, PO Box 30552, Nairobi, Kenya. Tel: +254 2 62 3401, Fax: +254 2 62 3692, E-mail: elisabeth.guilbaud-cox@unep.org. ◆

UNEP Division of Technology, Industry and Economics (DTIE) HIGHLIGHTS

New financial institutions signatory

The UNEP Statement by Financial Institutions on the Environment and Sustainable Development now has 192 banks among its signatories. Societe Generale, one of the largest banks in France and in the euro area, became a signatory in late November. The banks that have signed the UNEP Statement, along with 91 insurers, have agreed "to [work] cooperatively within the framework of market mechanisms towards common environmental goals." Societe Generale is the first private French bank to make such a commitment to sustainable development, environmental management and awareness-raising.

For more information, contact: Paul Clements-Hunt, UNEP DTIE Economics and Trade, 11-13 Chemin des Anemones, CH-1219 Chatelaine, Geneva, Switzerland, Tel: +41 22 917 82 98, E-mail: pch@unep.ch, Internet: http://unepti.net ◆

UNEP at World Travel Market 2001

A new UNEP DTIE teaching pack for the hospitality industry was introduced in November at London's World Travel Market 2001. Jacqueline Aloisi de Larderel, Assistant Executive Director of

Ozone roundup

Illegal trade, new substances cloud ozone horizon

Existing safeguards against illegal trade in ozone-depleting substances need to be strengthened, according to a new report on ODS trafficking. *Illegal Trade in Ozone Depleting Substances: Is There a Hole in the Montreal Protocol?* explores the complexities of illegal ODS trade and makes recommendations for putting an end to the problem.

UNEP DTIE's OzonAction Programme released the publication in October as a supplement to the *OzonAction* newsletter. Articles by government, academic and NGO experts from developed and developing countries are intended to raise awareness of the problem and stimulate action to combat trafficking in ODS. In his introduction to the supplement, Klaus Toepfer, UNEP Executive Director, writes: "Education is key to curtailing illegal trade. Ignorance is an ODS smuggler's best friend."

Shortly before the *OzonAction* supplement appeared, UNEP reported that scientists are worried about new chemicals appearing on the market for use in everything from fire extinguishers to cleaning fluids. The new substances (e.g. n-propyl bromide and halon-1202) are not controlled by the Montreal Protocol.

UNEP earlier disseminated a report from the *Japan Times* that over 100,000 bottles of CFC-12 were circulating in Japan. CFC-12 has been banned in industrialized countries since 1996. Used in car air conditioners, it was believed to have been imported illegally from countries where its production is still permitted.

Studies indicate that many of the new replacements for banned substances may have the potential to damage the ozone layer. The quantities in which these substances are manufactured are believed to be small, but scientists working with UNEP and at universities and institutes around the world are afraid they will be produced in ever increasing volumes. The emergence of the new chemicals has triggered concerns that the ozone layer might not, after all, recover by 2050 as UNEP had earlier estimated.

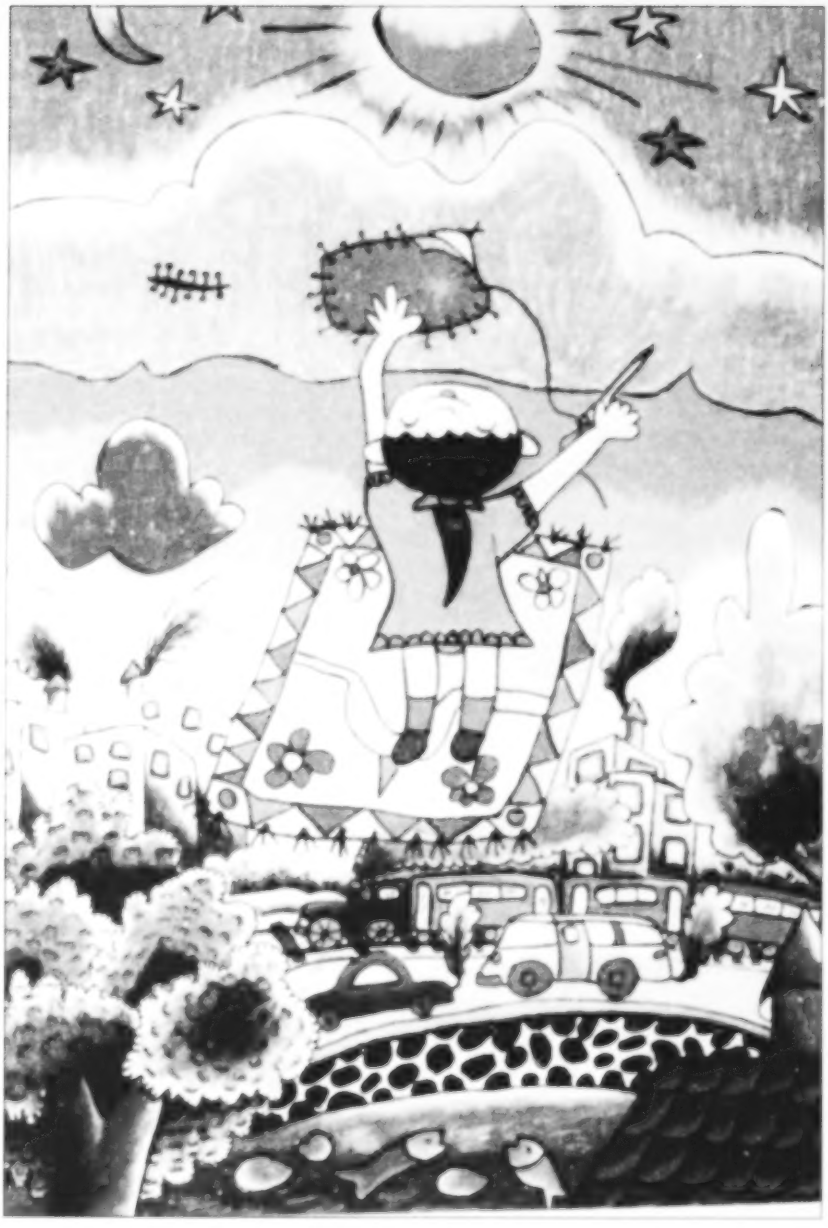
"Some of these new replacement chemicals may prove to be no threat at all to the ozone layer, although they may pose threats to human health, wildlife and the environment generally," Mr. Toepfer has commented. "Others, however, may have the potential to cause significant damage to stratospheric ozone, undermining our efforts to date. I would urge countries to carry out immediate scientific assessments of these new chemicals and to ban those that are shown to have real ozone-depleting potential."

He has proposed that governments, industry and organizations like UNEP cooperate on a long-term strategy to determine the ozone-depleting potential of future chemicals before they reach the market.

Until recently, scientists believed the new substances could not damage the ozone layer. They were not thought to persist long enough to reach the stratosphere. New research indicates that, under certain conditions, such substances and their breakdown products can travel far enough to reach the Earth's protective shield.

At least four new substances with a potential to damage the ozone layer have been identified. Nelson Sabogal of UNEP's Ozone Secretariat in Nairobi, says: "These are only the ones we know about so far. There may be many more. One of our difficulties is that each of these new substances can have up to 15 different names, which can make monitoring and tracking of them in international trade a tough task."

Hexachlorobutadiene has an ozone depleting potential higher than some of the ODS banned under the Montreal Protocol while another substance, n-propyl bromide, "is being aggressively marketed...as a solvent, a feedstock and as a carrier and intermediate for pharmaceutical and other industries," according to the Technology and Economic Assessment Panel of the Mon-



Laila Nuri, Prize-Winner, aged 8, Indonesia (*United Nations Environment Programme Children's Painting Competition*)

treal Protocol. Little is known about 6-bromo-2-methoxyl-naphthalene with respect to its scale of manufacture or ozone-depleting potential. It is used in making methyl bromide, a fumigant that is to be phased out worldwide under the Montreal Protocol. New research shows that halon-1202, a fire extinguishing substance that is also used by some countries' armed forces, may be long-lived.

For more information, contact: Rajendra Shende, Chief, Energy and OzonAction, UNEP DTIE, Tour Mirabeau, 39-43 quai Andre-Citroen, 75739 Paris Cedex 15, Tel: +33 1 44 37 14 59, Fax: +33 1 44 37 14 74, E-mail: rmshende@unep.fr; or Nelson Sabogal, Ozone Secretariat, UNEP, Tel: +254 2 623856, E-mail: nelson.sabogal@unep.org.

The OzonAction supplement on ODS trafficking is available in English, French and Spanish on the OzonAction web site (www.uneptie.org/ozonaction/main.html) or in a hard copy version from EarthPrint Limited, PO Box 119, Stevenage SG1 4TP, Hertfordshire, UK, Tel: +44 1438 748 111, Fax: +44 1438 748 844, E-mail: orders@earthprint.com, Internet: www.earthprint.com. ◆

Cuban, Georgian and Syrian films win ozone layer video prizes

Relaciones Peligrosas (Dangerous Relations), a 15-minute film by Pablo Massip Ginesta of Cuba, received first prize in the UNEP Global Video Competition on Ozone Layer Protection. It gives a historical view of the quest for cold storage and comfort during hot weather, showing how this led to the development of CFCs and ultimately to ozone layer depletion. The prize is worth US$ 3000.

The second prize was won jointly by an animated film, *Magnificent Sky*, by Nogar Begiashvili of Georgia and *Tomorrow*, a dramatic piece by Mohammed Karesly of Syria. *Magnificent Sky* looks at ozone protection through the eyes of children, based on their drawings. *Tomorrow* uses a narrative-free approach to raise awareness of ozone depletion and other environmental issues.

The Global Video Competition was organized by UNEP DTIE's OzonAction Programme with support from the Multilateral Fund for the Implementation of the Montreal Protocol. It was open to adults living in a developing country that is a Party to the Montreal Protocol. The jury was led by Ivan Hattingh, chairman of the board of the Television Trust for the Environment (TVE), and Wildscreen, a UK-based environmental film festival.

For more information, contact: Rajendra Shende (see above). ◆

UNEP and Director of DTIE *(see box)*, was also on hand to address delegates on the trade fair's WTM Environmental Awareness Day.

Mrs. Aloisi de Larderel, speaking at the WWF Environmental Debate (the highlight of Environmental Awareness Day), reminded participants that responsible tourism is the job of everyone involved – governments and local authorities, the industry (including training schools and hotel managers), tour operators and the tourists themselves. The key question is how to put responsible tourism into practice. UNEP is responding to this challenge by providing practical tools for all parties.

"For governments and local authorities, we have developed policy guidelines and principles for the implementation of sustainable tourism. For tourists we have produced awareness-raising materials on sensitive ecosystems like coral reefs. In the tourism industry, we are working with, for example, both hotel managers and the tour operators themselves. We must address the challenge at every level."

Tourism decision-makers need to be made well aware of how their activities affect the environment, and what solutions exist, Mrs. Aloisi de Larderel added. "Providing tomorrow's hotel and tourism managers with environmental education is vital if we are to achieve progress."

UNEP DTIE, together with the International Hotel & Restaurant Association and EUHOFA International, has published a teaching guide, *Sowing the Seeds of Change: An Environmental Teaching Pack for the Hospitality Industry*, which was introduced to the travel professionals at World Travel Market *(see review on page 88)*.

Mrs. Aloisi de Larderel also spoke about the UNEP/WTO/UNESCO Tour Operators Initiative for Sustainable Tourism Development, saying it has gone from strength to strength. Launched last year, it recently gained ten new members for a total of 25. The group now includes some of the biggest names in the industry, such as Accor Tours, British Airways Holidays, First Choice Holidays, Japan Travel Bureau, LTU Touristik, Scandinavian Leisure Group, Thomson Travel Group and TUI Group *(see www.uneptie.org/pc/tourism/industry/tointiative.htm)*.

UNEP is coordinating the preparation of a tourism industry sectoral report, to be presented at the World Summit on Sustainable Development next year. The industry is also involved in a new project UNEP has started with UNESCO that links conservation and tourism at six World Heritage Sites. This project brings together conservation education, planning, business development and marketing techniques to create a model for using tourism to promote the protection of important habitats. A key project component is involvement of tour operators in order to create better tourism products and sustainable management systems. The first sites are El Vizcaino and Sian Ka'an in Mexico, Komodo and Ujung Kulon in Indonesia, Rio Platano in Honduras and Tikal in Guatemala *(see www.uneptie.org/pc/tourism/sensitive/prot_areas_res.htm)*.

The UNEP Principles on the Implementation of Sustainable Tourism are available at www.uneptie.org/pc/tourism/policy/home_principles.htm.

For more information, contact: Robert Bisset, UNEP Spokesperson for Europe and DTIE Press Officer, 39-43 quai Andre Citroen, 75739 Paris Cedex 15, France, Tel: +33 6 22 72 78 82 (mobile phone) or +33 1 44 37 76 13, Fax: +33 1 44 37 14 74, E-mail: robert.bisset@unep.fr. ◆

New appointment for Jacqueline Aloisi de Larderel

Jacqueline Aloisi de Larderel, Director of UNEP's Division of Technology, Industry and Environment (DTIE), was recently also appointed Assistant Executive Director of UNEP. Mrs. Aloisi de Larderel remains UNEP DTIE's Director.

UNEP and UNESCO release youth survey results

Young middle-class city dwellers surveyed in a UNEP/UNESCO project consider the environment a major concern but their personal lives, their shopping behaviour could have an impact, according to a new report.

Is the Future Yours? was published by the two UN agencies over the summer *(for more information, see review on page 84)*. It presents among the first results of the UNEP/UNESCO Research Project on Youth and Sustainable Consumption. In the survey carried out by the two agencies last year, young people between 18 and 25 years of age were asked about their consumption patterns and perceptions of sustainable development. In response to their need for more information (as reflected in the survey results), and in an effort to translate youth values and concerns into day-to-day actions, UNEP and UNESCO are continuing to cooperate in this area.

The survey, the central part of the Youth and Sustainable Consumption project, reached 10,000 middle class young people in major cities of 24 countries around the world. The results provide preliminary insights into the attitudes and interests of young adults with respect to consumption that is more environmentally and ethically sound.

Survey results indicated some confusion about consumption behaviour. For example, while respondents said they were aware of the environmental consequences of product use and disposal, they also said they did not see how their shopping patterns could affect the environment. Another key result was that respondents' major concerns for the future were environmental, human rights and health. A majority preferred individual to collective actions to improve the world.

The UNEP/UNESCO follow-up to the Youth

18th UNEP Consultative Meeting with Industry Associations: representatives of international industry groups and NGOs in discussion session

and Sustainable Consumption project will be a web-based tool called 'youthXchange' intended to give youth and consumer associations, schools and local authorities material for constructive 'youth-friendly' events, campaigns and training sessions concerned with how to live more sustainably.

Is the Future Yours? is available at www.uneptie.org/pc/youth_survey. The survey was carried out following a request by governments in 1999 that UNEP develop a sustainable consumption strategy for youth.

For more information, contact: Isabelle Murras, UNEP DTIE, Tour Mirabeau, 39-43 quai André Citroen, 75739 Paris Cedex 15, France. Tel: +33 1 44 37 14 21. Fax: +33 1 53 37 14 73. E-mail: isabelle.murras@unep.fr. ◆

NGOs join 18th industry association meeting

As part of the preparation for the World Summit on Sustainable Development (WSSD) next autumn in Johannesburg, representatives of some 30 industry associations – and, for the first time, NGOs – met in Paris in October for UNEP's 18th Consultative Meeting with Industry Associations.

Opening the meeting, Jacqueline Aloisi de Larderel, UNEP Assistant Executive Director and Director of UNEP DTIE, said business and industry have an important role to play in making WSSD a success. She also briefed participants on workshops held the previous day, in which industry groups and others discussed drafts of sectoral reports for WSSD. UNEP DTIE is coordinating the production of over 20 such reports, involving 35 industry organizations, and is organizing regional industry consultations.

In addition to industry associations worldwide – from the Alliance for Beverage Cartons and the Environment to the World Coal Institute – non-industry groups sent representatives including Remi Parmentier, Political Director of Greenpeace International, and Ricardo Navarro, Chair of Friends of the Earth International. Topics discussed included corporate citizenship and accountability, with a focus on UN Secretary-General Kofi Annan's Global Compact initiative, and how to increase human welfare with less pressure on nature.

For more information, contact: Laura Williamson, Tel: +33 1 44 37 14 69, E-mail: laura.williamson@unep.fr, or Cornis Van der Lugt, Tel: +33 1 44 37 14 45, Fax: +33 1 44 37 14 7, E-mail: cornis.lugt@unep.fr. Consultative meeting reports via Internet, www.uneptie.org/outreach/business/ind_meeting2001.htm. ◆

UNEP DTIE web sites

◆ APELL web site, refurbished and now with more up-to-date information than ever:
www.uneptie.org/pc/apell

◆ Offshore Oil and Gas Environment Forum, with several new countries now in the database:
www.oilandgasforum.net

◆ Sustainable Alternatives Network, developed with the Global Environment Facility:
www.sustainablealternatives.net
(see Web Site Highlights on page 88)

◆ EMERALD, a new portal of the International Environmental Technology Centre on local development initiatives:
www.urban-emerald.net
(see Web Site Highlights on page 88)

Many UNEP DTIE web page addresses have been modified in recent months. For the most current pages, click through from the Division's main site: *www.uneptie.org*.

Export credit agencies meet on "greening"

Some 70 senior staff members of export credit agencies, banks and insurers – those involved in facilitating billions of dollars' worth of trade annually – met in Paris under UNEP auspices in October to explore how to continue to "green" their operations. The two-day workshop, hosted by Coface, the French export credit agency, was the first such gathering of export credit underwriters, private sector financiers, environmental experts and UN officials to discuss environmental issues relevant to finance, particularly how to improve project screening.

For more information, contact: Martina Otto, UNEP DTIE, Tel: +33 1 44 37 76 15, E-mail: martina.otto@unep.fr, or Robert Bisset (see above). ◆

New guide to UNEP DTIE publications

UNEP DTIE has issued its most comprehensive publication catalogue to date. *Environment Publications: Technology, Industry, Economics – Catalogue 2002* lists the most important books, CD-ROMs and videotapes published by UNEP DTIE since the 1992 Rio summit, with complete ordering details.

For more information, contact: Francoise Ruffle, UNEP DTIE Division Office, 39-43 quai André Citroen, 75739 Paris Cedex 15, France. Tel: +33 1 44 37 14 37, Fax: +33 1 44 37 14 74, E-mail: fruffle@unep.fr. On-line catalogue in pdf via Internet: www.uneptie.org/media/publications.htm. ◆

World Summit Business Awards

The International Chamber of Commerce (ICC), in association with UNEP DTIE, has announced the establishment of World Summit Business Awards for Sustainable Development Partnerships, to be presented at the World Summit on Sustainable Development in Johannesburg. Nominations are being sought for effective multi-stakeholder partnerships that are designed to pursue, and have achieved, sustainable development. Eligible initiatives include formal and informal cooperative programmes between business organizations (whether individual companies or professional associations) and any combination of public and private sector institutions, governmental or non-governmental organizations, labour, research, development, community, charitable agencies, etc. Participation by enterprises in developing countries is particularly encouraged.

For more information (or for application materials and nomination forms), see: www.iccwbo.org/sdcharter/corp_init_awards/sd_award.asp. Or send enquiries to: International Selection Panel, c/o International Chamber of Commerce (ICC), 38 Cours Albert 1er, Paris 75008, France. ◆

Books & Reports

GENERAL

Design + Environment: A Global Guide to Designing Greener Goods

This practical guide to eco-design had its roots in the EcoReDesign[TM] programme at the Centre for Design at Royal Melbourne Institute of Technology in Australia, with which the authors have all been affiliated. Designed as a workbook rather than an academic text, *Design + Environment* provides background on (and a step by step approach to) design for environment, or DfE. Life-cycle assessment is emphasized. The authors discuss strategies relating to each critical stage of product life, from raw materials selection to recovery and recycling. Energy and water efficiency are considered, as are the trade-offs implicit in the choice of eco-design strategies. The final chapter addresses emerging trends in DfE. The book is studded with illustrated case studies, most of them specific to particular product groups.

H. Lewis, et al. (2001). Greenleaf Publishing, Aizlewood Business Centre, Aizlewood's Mill, Nursery Street, Sheffield S3 8GG, UK. Tel: +44 114 282 2475. Fax: +44 114 282 3476. E-mail: sales@greenleaf-publishing.com. Internet: www.greenleaf-publishing.com. P/bk., 200p. ISBN 1-874719-43-8.

Metaphors for Change: Partnerships, Tools and Civic Action for Sustainability

Rejecting previous "metaphors" used in environmental discussion (e.g. "man is the enemy", "less is more"), the editors examine "new metaphors" they consider to have greater potential for the world of the 21st century: the polluter pays principle, eco-efficiency, life-cycle assessment, dematerialization, to give just a few examples. The articles in Part 1 discuss these and other concepts. Part 2 is a short section on partnerships within industry, or between business and government. Part 3, "Tools for Change," deals with policy tools, management tools, design tools, analytical tools, financial tools and technological tools. The fourth and final part is devoted to "Civic Actions for Change".

Many contributions were drawn from the ECO 97 and ECO 99 conferences organized by the French-based Association for Colloquia on the Environment (with which the editors are associated). Others were specially commissioned or have appeared elsewhere and are reprinted here. Authors have a wide range of orientations, e.g. industry and business, academia, international organizations, politics, NGOs, the news media.

P. Allen, et al. (eds.) (2001). Greenleaf Publishing (see above). P/bk., 200p. ISBN 1-874719-37-3.

Reference Manual for the Integrated Assessment of Trade-Related Policies

The Economics and Trade Branch of UNEP DTIE has produced this manual to give policy-makers, decision-makers and trade officials a better understanding of the potential environmental, economic and social effects of trade-related policies. It is also intended to serve as an aid to negotiation, formulation and implementation of trade policies and agreements. It tells how to develop a methodology for integrated economic, environmental and social assessment, using a method that allows the user to develop an approach tailored to a particular situation and set of priorities. The manual discusses the need to identify the purpose of such an assessment, outlines the steps involved in designing the assessment, considers various techniques that can be used, shows how to ensure the assessment is actually relevant to policy-making, and provides ideas on how best to use the assessment results to shape national policies and promote sustainability.

(2001). UNEP. Available from: Economics and Trade Unit, International Environment House, 15 chemin des Anémones, CH-1219 Châtelaine, Geneva, Switzerland. Tel: +41 22 917 8243. Fax: +41 22 796 9240. E-mail: etu@unep.ch. Internet: www.unep.ch/etu/etp/index.htm. P/bk., 85p.

Impact of Environmental Information on Decision-Making Processes and the Environment

The latest in a series of occasional papers by GRID-Arendal, UNEP's environmental information centre located in Arendal, Norway, this is the first product of a programme aimed at better understanding how environmental information affects decision-making. It seeks to answer questions like: How necessary is environmental information? Is it effective? Is it cost-effective? How can its effects be measured? How can it be improved? This publication notes that two of the main concepts behind the demand for environmental information are: a) knowledge is power, and b) time is money. It emphasizes the importance of determining the needs of intended user groups and tailoring information to those needs. One of the authors' key observations is that many environmental issues cannot be resolved without putting environmental information in the larger context of economic, social and cultural information.

N. Denison and L. Carmodi-Iversen (2000). UNEP/GRID-Arendal, Service Box 706, N-4808 Arendal, Norway. Tel: +47 37 03 50 50. Fax: +47 37 03 50 50. E-mail: grid@grida.no. Internet: www.grida.no/report. P/bk., 30p.

Food for All: Can Hunger Be Halved?

Why are nearly 800 million people around the world still victims of chronic hunger? This new report from the Panos Institute addresses the question of how the world can produce enough food sustainably. Coming down on the side of integrated farming systems (see the special issue of *Ambio and Environment* on "Sustainability and the global food industry", Vol. 22, No. 2-3), the report looks at the impact of farming on land and soil, pesticides, effects of global warming on agriculture, and water and biodiversity issues. It identifies elements of sustainable farming – e.g. biological pest control, solutions tailored to local conditions, promotion of secure land tenure – but suggests in the end that current trade agreements may be undermining the poorest countries' efforts to police farmers. *Food for All* includes numerous case studies.

(2001). Panos Institute, 9 White Lion Street, London N1 9PD, UK. Tel: +44 207 278 1111. Fax: +44 207 278 0345. E-mail: mark@panosinstitute.org.uk. Internet: www.panos.org.uk. P/bk., 44p. ISBN 18 70671 05 5 8.

Environmental Management System Training Resource Kit

This is the latest edition of a best-seller published by UNEP DTIE, the International Federation of Consulting Engineers and the International Chamber of Commerce. With environment increasingly seen as a major factor in corporate decision-making, environmental issues are often associated with virtually all aspects of an organization's management – from financing to production, and from marketing to corporate reporting. Thus it has become important to take a systematic, integrated approach to questions such as how to manage environmental issues throughout the range of a company's activities and how to consistently, visibly improve a company's environmental performance.

A practical guide to environmental management systems, the *Environmental Management System Training Resource Kit* explains how to report on a company's environmental performance and how to integrate an EMS with other systems such as health and safety or chemicals management. Designed as a "train the trainer" tool, it provides all elements necessary to conduct courses in EMS for companies. However, it would also be useful to anyone interested in understanding and/or using an EMS. This new edition gives special attention to what the structure and elements of an EMS have in common with ISO

14001. The kit is complemented by the publication described below. Both are also available on CD-ROM and in pdf at: www.fidic.org/bookshop/product_find.asp?searchstring=advice.

(2001). Ring binder. ISBN 92-807-2058-9. Also see www.uneptie.org/outreach/businessvens/translation.htm *on how to order the paper (hard copy) version of the kit in Arabic, Chinese, Czech, Estonian, German, Hungarian, Icelandic, Italian, Japanese, Lithuanian, Polish, Slovak, Spanish or Russian.*

Environmental Management System Handbook

Designed for use in seminars organized using the *Environmental Management System Training Resource Kit*, this handbook helps participants follow the lessons in a very simple and visual way. It also provides practical instructions on how to use an EMS after the seminar. Its central feature is a step-by-step checklist, followed by detailed information on the purpose and objectives of each step. There is a series of quick-reference "fact sheets" on global environmental issues.

(2000). UNEP/FIDIC/ICC. Available from EarthPrint Limited, PO Box 119, Stevenage SG1 4TP Hertfordshire, UK. Tel: +44 1438 748 111. Fax: +44 1438 748 844. E-mail: orders@earthprint.com. Internet: www.earthprint.com. *Pbk., 120p. ISBN 92-807-1909-2.*

Urban Environmental Management: Environmental Management System Training Resource Kit

Inspired by the best-selling training kit described above, this version is aimed specifically at municipal managers and others involved in implementing or promoting EMS for local authorities. It, too, includes case studies, methods for organizing workshops, and tools to help local officials disseminate the EMS concept. City managers and related players were directly involved in designing and drafting the Urban Environmental Management kit, under the guidance of UNEP DTIE's International Environmental Technology Centre in Osaka.

(2001). UNEP IETC. Available from EarthPrint Limited (see above).

Sustainability through the market: seven keys to success

This report from the World Business Council for Sustainable Development is the culmination of a four-year project to develop a business case for sustainable development. The "seven keys" of the subtitle are: "innovate: practise eco-efficiency"; "move from stakeholder dialogues to partnerships for progress"; "provide and inform consumer choice"; "improve market framework conditions"; "establish the worth of the Earth"; and "make the market work for everyone". Discussions of each "key" are liberally illustrated with case studies, many from major corporations. The report concludes with a "to do list" of tasks, such as "Brief

your management team on carbon permits trading and evaluate the balance of threats and opportunities on your value chain"; and "Test your key technologies and markets against changing trends in societal acceptance."

(2001). World Business Council for Sustainable Development (WBCSD), c/o E&Y Direct. Tel: +44 1423 357 904. Fax: +44 1423 357 900. E-mail: wbcsd@e-ydirect.com. Internet: www.wbcsd.org. *Pbk., 54p. ISBN 2-940240-19-1.*

Cleaner Production: A Guide to Sources of Information

This is the fourth edition of a popular information guide from UNEP DTIE's Cleaner Production programme. It can be used to find relevant organizations, publications, electronic resources, audiovisual material, training courses and much more. Also available on CD-ROM.

(2001.) UNEP. Available from EarthPrint Limited (see above). Pbk., 132p. ISBN 92-807-1696-4. The pdf file can be downloaded at www.uneptie.org/pc/cp/library/catalogue/catalog_general.htm.

Applying Economics to the Environment

The author, a professor of economics and director of the Institute for Public Policy Studies at Vanderbilt University in the United States, seeks to dispel the notion that economics comes with a built-in "anti-environment bias". *Applying Economics to the Environment* is based on courses in environmental economics and environment and development. Thus it is broad in scope. While it offers a relatively sophisticated presentation of economic analysis, it also reviews microeconomic concepts as background.

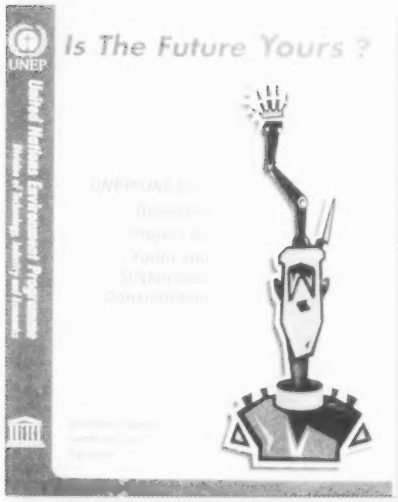
In essence, the author examines the environmental policy process through an economics optic, via discussions of cost-benefit analysis, environmental management, damage and benefit estimation, monitoring and enforcement, and risk analysis. There are several chapters on development and environment, including a look at benefit estimation and choice of policy instruments in the developing country context.

C.S. Russell (2001). Oxford University Press/OUP USA, 198 Madison Avenue, New York, NY 10016, USA. Tel: +1 212 726 6000. E-mail: orders@oup-usa.org. Internet: www.oup-usa.org. *Hbk., 383p. ISBN 0-19-512684-X.*

Is The Future Yours?

UNEP and UNESCO surveyed some 10,000 middle-class young people in major cities in 24 countries as part of their joint Research Project on Youth and Sustainable Consumption *(see related news story above)*. A description of the survey, carried out with UNEP's Youth Advisory Council, and of the survey results are presented in *Is The Future Yours?* This colourful booklet, designed to appeal to an international audience of 18- to 25-year-olds, also suggests possible future actions and describes further steps in the UNEP/UNESCO initiative. The results are available in more formal style from UNESCO as *Youth, Sustainable Consumption Patterns and Life Styles*, published by the Management of Social Transformations (MOST) Programme. This report includes country case studies and the proceedings of the November 2000 UNEP/UNESCO Expert Workshop on Youth, Sustainable Consumption and Life Styles.

(2001). UNEP/UNESCO. Available from



EarthPrint Limited (see above) and UNESCO-MOST, 7, place de Fontenoy, 75352 PARIS 07 SP, France. Tel: +33 1 45 68 45 76. Fax: +33 1 45 68 57 24. E-mail: carlos.milani@unesco.org. Internet: www.unesco.org/education/youth_consumption/studies.shtml.

Environmental Science: Physical Principles and Applications

The authors of this introductory text are professors in the Physics Department of Amsterdam's VrijeUniversiteit (Free University). While their introduction makes clear that *Environmental Sci-*

ence is a physics textbook, their approach is to go easy on mathematics (for example, an appendix gives a quick lesson on simple vector algebra) and make the science accessible by including a wealth of examples to illustrate the more theoretical parts of the text. Even general readers with little science or mathematics background should find this a useful primer on the mechanics of such environment-related fields as weather and climate, thermodynamics, nuclear physics, sound waves, magnetic surveys and spectroscopy.

Environmental Science takes account of the latest developments, theories and research and does not ignore the social perspective. Topics covered include climate change, energy, pollution dispersion and noise. The final chapter, "Science and Society", touches on health effects, environmental policy and the responsibility of scientists. An accompanying manual for teachers is available. There is a supplementary web site with experiments and simple models related to the text (*www.nat.vu.nl/envphweep*).

E. Boeker and R. van Grondelle (2001). John Wiley & Sons Ltd., Baffins Lane, Chichester, West Sussex PO19 1UD, UK. Tel: +44 1243 770 668. Fax: +44 1243 770 638. E-mail: publicity@wiley.co.uk. Internet: www.wiley.co.uk. Pbk., 362p. ISBN 0-471-49577-8.

Environmental Technology Assessment (EnTA) Workshop Report

UNEP DTIE's International Environmental Technology Centre, the International Lead Management Centre and Carl Duisberg Gesellschaft convened an international workshop on EnTA in Manila, the Philippines, in February 2000. The purpose of the workshop was to familiarize participants with the EnTA process. Recycling of car batteries was used as a case study. This report gives details on the presentations made and workshop sessions.

(2001). UNEP. Available from: EarthPrint Limited (see above). Pbk., 90p.

Greening the Corporation: Management Strategy and the Environmental Challenge

This exploration of corporate responses to environmental challenges focuses on four major international companies: Atlantic Richfield Corporation (ARCO) Chemical, Ben and Jerry's Homemade, Inc., Royal Dutch Shell and The Body Shop International. ARCO Chemical and Shell are taken to represent "traditional" corporate culture, while Ben and Jerry's and The Body Shop are well known for what the author calls their "social-environmental" corporate culture.

A key ingredient in the analysis is the 1993 publication, *Environmental Management in Transnational Corporations: Report of the Benchmark Corporate Environmental Survey*. That survey was carried out by what was then the UN Centre on Transnational Corporations. The author also interviewed environmental executives, corporate environmental consultants, staff at consumer groups that monitor corporate activities, academics, and many other figures involved in "corporate greening". He discusses the environmental policy and environmental record of each company. The book concludes with suggestions regarding the policy implications of his findings.

P.T. Robbins (2001). Earthscan Publications Ltd. (see above). Pbk., 198p. ISBN 1-85383-772-5.

Greening Industry: New Roles for Communities, Markets, and Governments

This World Bank Policy Research Report summarizes six years of research, project work and observation by economists, environmental engineers and policy analysts. Its theme is environmental management in developing countries: its history, the latest approaches, and its relationship with economic development.

The authors do not accept the received idea that developing countries lack the infrastructure, resources or institutional capability to control industrial pollution. Instead, they conclude that even the poorest countries can achieve environmentally sustainable industrial development. They describe what they call a new model for pollution control in the developing world, which pays particular attention to the problems of the poor and sees equal roles for government, markets and the community.

The new model, based on the recognition that traditional regulation is not appropriate for many poorer countries, also relies on transparent, "information-intensive" regulation. This approach, the authors say, is increasingly being adopted following years of efforts based on expensive "imported" command-and-control regulations.

(2000). Oxford University Press for The World Bank, 1818 H Street, N.W., Washington, D.C., 20433, USA. Tel: +1 202 477 1234. Fax: +1 202 477 6391. E-mail: books@worldbank.org. Internet: www.worldbank.org. Pbk., 150p. ISBN 0-19-521127-8. Available in Chinese from China Financial & Economic Publishing House, Rm. 916, Xinzhi Mansion, No. Jia 28, Fucheng Road, Haidian District, Beijing, 100010, China. E-mail: chcfph@dx.gov.cn. Internet: www.chcfph.com.

Greening Industry is part of the World Bank's Economics of Industrial Pollution Control Research Project. See www.worldbank.org/nipr for further information; material from this web site is included on a CD-ROM accompanying the book.

Standards and Codes of Practice to Eliminate Dependency on Halons: Handbook of Good Practices in the Halon Sector

UNEP DTIE's OzonAction Programme and the Fire Protection Research Foundation collaborated to produce this handbook. It is intended for National Ozone Units, public fire-fighting and fire-protection services, fire equipment suppliers and other halon users, particularly in developing countries, as well as maintenance companies and NGOs. With respect to halons, the first control challenge for developing countries under the Montreal Protocol occurred in January 2002 when the requirement to freeze halon consumption at 1995-97 levels. The handbook was designed to smooth the transition to that and future steps in the Montreal Protocol process for halons.

(2001). UNEP. Available from EarthPrint Limited (see above). Pbk., 74p. ISBN 92-807-1988-1.

CLIMATE CHANGE/ AIR POLLUTION

Two Challenges, One Solution: Case Studies of Technologies that Protect the Ozone Layer and Mitigate Climate Change

Much of the world is still making choices concerning the phase-out of ozone-depleting substances. Thus it is vital for these choices to take place not in isolation, but in the context of other environmental challenges. ODS decisions need to consider the impact that they could have on global warming. This booklet from UNEP DTIE's OzonAction Programme discusses factors relating to ozone and to global warming that should be taken into account in seeking non-CFC alternatives to foams, aerosols, refrigerants and halons. Using 15 case studies from around the world, it highlights real ODS phase-out solutions that minimize total contributions to global warming. Aimed at National Ozone Units, *Two Challenges, One Solution* will also be of interest to industry users and equipment suppliers. The case studies are designed to present lessons that are pertinent in both developing and developed countries.

(2001). UNEP. Available from EarthPrint Limited (see above). Pbk., 33p. ISBN 92-807-2080-3.

Greenhouse Gas Emissions: Global Business Aspects

This call to action on global warming focuses on the Kyoto Protocol, especially the clean development mechanism, joint implementation and

emissions trading (i.e. the Protocol's "implementation mechanisms"). The author, who heads a London-based consulting firm specializing in energy and environment, argues for remedial strategies, based particularly on joint implementation and emissions trading, to abate global warming. He also examines likely effects of other major types of air, land and water pollution produced by industry and other sources.

M. Sci. (2001). Springer Verlag, Tiergartenstrasse 17, D-69121 Heidelberg, Germany. Tel: +49 6221 487 0; Fax: +49 6221 487 141; E-mail: orders@springer.de; Internet: www.springer.de. Hbk., 375p. ISBN 3-540-67889-1.

Climate Change 2001: Mitigation; Summary for Policymakers and Technical Summary of the Working Group III Report

This extract from the third volume of the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) provides a summary for policy makers and a technical summary of the contribution of IPCC Working Group III, whose brief was to assess the scientific, technological, environmental, economic and social aspects of mitigating climate change. (The first two volumes of *Climate Change 2001* were *The Scientific Basis* and *Impacts, Adaptation, and Vulnerability*.) It was produced by UNEP and the World Meteorological Organization (WMO) as a handy complement to the main WGIII contribution, which contained ten chapters and supporting annexes in addition to these two summaries.

(2001). UNEP/WMO. Available from: EarthPrint Limited (see above). Pbk., 82p.

Managing Technological Change

This short document, prepared by UNEP DTIE, introduces and explains the ideas and issues covered by *Methodological and Technological Issues in Technology Transfer*, a special report from the Intergovernmental Panel on Climate Change (IPCC) published in 2000. It is essentially intended to serve as a "popular version" of that report, as it was written to help improve understanding of the role of technology transfer to developing countries with respect to climate change. Part I covers basic concepts such as the link between technology and climate change and the distinction between mitigation and adaptation; it includes a summary of a case study from the special report. Part II presents more case study summaries to illustrate the actual process of technology transfer.

(2001). UNEP. Available from EarthPrint Limited (see above). Pbk., 20p. ISBN92-807-2067-7. Downloadable as a pdf file at www.uneptie.org/energy/publ/mantechange.htm.

CHEMICALS, POLLUTION AND ACCIDENTS

Statistical Methods for Detection and Quantification of Environmental Contamination

This handbook, aimed especially at scientists and engineers involved in monitoring programmes, presents statistical methods that allow early detection and quantification of contaminants. It also describes procedures applicable to all environmental constituents and includes case studies illustrating practical applications. The authors demonstrate the use of analytical measurements in making environmental impact decisions, and in comparing environmental data with regulatory standards and naturally occurring background concentrations of pollutants. *Statistical Methods for Detection and Quantification of Environmental Contamination* is divided into two parts: the first discusses detection and quantification in the laboratory, and the second covers fieldwork. Three case studies dealing with long-term monitoring, potential areas of concern regarding soil, and groundwater evaluation are included in the latter section. The authors also briefly review software that can be used to estimate detection and quantification limits.

R.D. Gibbons and D.E. Coleman (2001). John Wiley & Sons (see above). Hbk., 384p. ISBN 0-471-25532-7.

WATER

Integrated Waste Management Practices to Protect Freshwater Resources: Case Studies from West Asia, the Mediterranean and the Arab Region

This report, No. 17 in the Technical Publication Series produced by UNEP DTIE's International Environmental Technology Centre, features case studies on solid waste management experiences, the impact of wastewater discharges on freshwater resources, financing of waste management, technical concerns relating to landfill sites, suitable waste management technologies, international cooperation, and private sector participation.

(2001). UNEP. Available from EarthPrint (see above). Pbk., 98p. ISBN 92-807-2019-8.

NATIONAL/REGIONAL

Environmental Management in Industrial Estates in China

This background paper examines the evolution of industrial zones in China during the transition from central planning to a market system. It also reports on their current state of development. Based on desk studies, questionnaires, site visits, and interviews with estate managers and policy makers, it assesses the economic significance of such estates as well as the environmental management approaches used. This paper is part of UNEP DTIE's joint work since late 1999, together with the China State Environmental Protection Administration, to raise awareness and develop technical know-how with respect to China. Drafted by the Environmental Planning Institute of the China Research Academy of Environmental Sciences, it discusses the environmental laws and regulations that are applicable to industrial estates in China, the various systems and instruments available for environmental management, Chinese environmental services, institutions and infrastructure, and strategies for environmental management, among other topics. A number of case studies are included.

(2001). UNEP. Available from EarthPrint Limited (see above). Pbk., 96p. ISBN. 92-807-1997-1.

Green Korea 2001: In Pursuit of Economic and Environmental Sustainability

Green Korea 2001 outlines the latest environmental projects developed by the government of the Republic of Korea, discusses performance in 1999-2000, and presents several special reports. Particular emphasis is put on the Eco-2 Project, which is intended to identify strategies that will benefit both the environment and the economy. In the words of the Korean Environment Minister, Kim Myung-Ja, Eco-2 focuses on "developing environmental industry and technology, strengthening resource conservation and recycling, applying demand-side water management, enhancing the environmental information infrastructure, and creating a sustainable development indicator." Major environmental policy areas discussed in *Green Korea 2001* include international cooperation, water quality in major rivers, water supply management, air quality, soil management, preservation of tidal flats, the extended producer responsibility system, the national environmental labelling programme and the GR Mark quality certification for recycled goods, environmental technology, the National Environment Survey, and Local Agenda 21.

(2001). Ministry of Environment, Government

Complex Gwacheon, Jungang dong 1, Gwacheon si, Gyeonggi do, 427-729, Republic of Korea. Tel: +802 504 9244, Fax: +822 504 9206, Internet: www.me.go.kr.

Coastal Zone Management in the Mediterranean

The Mediterranean Sea, with its limited outlets, is strongly affected by pollution from both onshore and offshore activities. Land-based sources account for 80% of the pollution reaching the Mediterranean. This white paper from the Priority Actions Programme Regional Activity Centre under UNEP's Mediterranean Action Plan aims to stimulate debate on issues and policy options concerning integrated coastal area management in the Mediterranean region. It outlines the need for proactive policy options, describes initiatives already under way at the regional, national and local levels, and makes recommendations to further integrated management and sustainable development. Also available in French *(see below)*.

(2001). UNEP/MAP/PAP. Available from: Regional Activity Centre for the Priority Actions Programme, Kraj Sv. Ivana 11, PO Box 576, HR-21000 Split, Croatia. Tel: +385 21 34 34 99 or 59 11 71, Fax: +385 21 36 16 77, E-mail: pap@gradst.hr, Internet: www.pap-thecentre.org. Pbk., 74p. ISBN: 953-6429-40-3.

Conceptual Framework and Planning Guidelines for Integrated Coastal Area and River Basin Management

The increasingly intensive human use of coasts and river basins affects their role as natural environments. The Priority Actions Programme/Regional Activity Centre of UNEP's Mediterranean Action Plan has reissued these guidelines to the integrated management of such areas, as they could prove useful not only in the Mediterranean region but elsewhere.

(1999/2001). UNEP/MAP/PAP. Available from EarthPrint Limited (see above). Pbk., 78p. ISBN: 953-6429-27-6.

Compendium of PAP Technical Reports and Studies (1995-2001)

This bilingual (French-English) collection of abstracts describes technical reports and studies published since 1995 by the Priority Actions Programme of UNEP's Mediterranean Action Plan, implemented by the Regional Activity Centre in Split, Croatia.

(2001). UNEP/MAP/PAP. Available from Regional Activity Centre for the Priority Actions Programme (see above). Pbk., 29p. ISBN: 953-6429-39-X.

INDUSTRY SECTORS

Driving Sustainability: Can the Auto Sector Deliver Sustainable Mobility?

Driving Sustainability is the third sector report in the "Engaging Stakeholders" series (published by SustainAbility in collaboration with UNEP DTIE). The first in a new collection called "Gordian Knots", it characterizes the environmental, social and economic problems associated with "automobility" as some of the toughest strands in the Gordian Knot of sustainable development. The report looks at how ten major automakers (three German, two French, two American, two Japanese and one Italian) score on four potentially knot-cutting issues: climate change, life cycles, liveable cities, and emerging economies. Criteria include the company's record on technology and research, consumer behaviour, barriers to sustainable mobility, and relationships with other actors (e.g. government). *Driving Sustainability* is available in both paper and electronic form. The latter includes links to further resources, protected by a password which is issued with each copy sold.

(2001). SustainAbility, 11-13 Knightsbridge, London SW1X 7LY, UK. Tel: +44 207 245 1116, Fax: +44 207 245 1117, E-mail: info@sustainability.com, Internet: www.sustainability.co.uk. Pbk., 32p. ISBN 1-903168-03-1.

Sustainable Finance & Banking: The Financial Sector and the Future of the Planet

Through a systematic assessment of major banks worldwide, the author, Marcel Jeucken, sets out to demonstrate how crucial the banking and finance industry is to progress in sustainable development. *Sustainable Finance & Banking* addresses two broad questions: why is this sector key to achieving sustainability, and why does sustainability present both threats and opportunities for banks? Jeucken is a senior economist with the Rabobank Group in the Netherlands, which (along with the Dutch Environment Ministry) helped sponsor the book's publication. He gives a comprehensive account of current best practice, analyzes differences in approach and performance, and recommends actions and policies for improved performance that will contribute to sustainable development. Aimed at senior management and staff in the financial sector, the book is intended to be accessible to all stakeholders.

M. Jeucken (2001). Earthscan Publications Ltd., 120 Pentonville Road, London, N1 9JN, UK. Tel: +44 207 278 04 33, Fax: +44 207 278 1142, E-mail: earthinfo@earthscan.co.uk, Internet: www.earthscan.co.uk or www.sustainability-in-finance.com. Pbk., 234p. ISBN 1-85383-766-0.

Sourcebook of Technologies for Protecting the Ozone Layer: Methyl Bromide

Produced by UNEP DTIE's OzonAction Programme, this book contains technical descriptions of the full range of alternatives to methyl bromide for farming and horticulture, data on their cost and efficacy, and an outline of the advantages and disadvantages of each option. Extensive tables, reference lists and annexes provide the type of practical information needed for action, including names and addresses of businesses and individuals who are experts on or vendors of products and services related to methyl bromide alternatives. With this information in hand, current users of this ozone-depleting chemical will be able to weigh the many options before them carefully and thoroughly.

(2001). UNEP. Available from EarthPrint Limited (see above). Pbk., 316p. ISBN 92-807-1974-2.

The Native Tourist: Mass Tourism Within Developing Countries

In the vast majority of developing countries, the number of nationals travelling for leisure is considerably higher than that of international tourist arrivals. While this category of tourism is experiencing very rapid growth, information on domestic and regional tourism in developing countries is surprisingly limited. The dominant concept of tourism in the South focuses on receiving relatively wealthy foreign visitors from the North. The editor of *The Native Tourist* maintains that this "Northern bias" affects not only government policies on tourism, but also the literature and data available on the subject. His principal aim is to increase knowledge and debate concerning the implications of increasing domestic/regional tourism in developing countries. The chapters rely mainly on reviews of secondary material, but authors (based for the most part in Mexico, Thailand, Brazil, South Africa, China and India) have also compiled information derived from their own work. Topics include supply and demand and the economic role of national tourism. The editor has provided an overview, "The Growth of National and Regional Tourism in Developing Countries".

K.B. Ghimire (2001). Earthscan Publications Ltd. (see above). Pbk., 234p. ISBN 1-85383-804-7.

Web Site Highlights

Sustainable Alternatives Network

www.sustainablealternatives.net

This site, developed with the Global Environment Facility (GEF), gives access to a network of marketplaces for sustainable technology alternatives. It is aimed at facilitating rapid dissemination of such technologies, as well as other products and services that support implementation of multilateral environmental agreements. Benefits to users include access to market, financial, technology and policy information to enhance market transparency; access to on-line procurement tools for cleaner technology alternatives; and on-site advisory, coaching and mentoring services and incentives for alternative feasibility studies.

For more information, contact: Frank Rittner, General Manager, c/o UNEP DTIE, 39-43, quai Andre-Citroen, 75739 Paris Cedex 15, France, Tel: +33 1 44 37 30 08, Fax: +33 1 44 37 14 74, E-mail: frittner@worldbank.org.

International Solid Waste Association

www.iswa.org

The International Solid Waste Association (ISWA), an NGO based in Denmark, has put its newsletter on-line. Site users now read the *ISWA Times* in pdf form. They can also check out the calendar of events planned by ISWA and associated organizations and obtain ISWA reports.

For more information, contact: ISWA General Secretariat, Overgaden Oven Vandet 48 E, DK-1415 Copenhagen K, Denmark, Tel: +45 32 96 15 88, Fax: +45 32 96 15 84, E-mail: iswa@iswa.dk.

Environmental Management Exchange and Resource Alliance for Local Development (EMERALD)

www.urban-emerald.net

This new portal, developed by the International Environmental Technology Centre, is an "umbrella site" for local development initiatives, bringing together existing web sites concerned with urban and local environment issues. Its basic purposes are to develop awareness and educate people about issues relating to urban environments, assist in policy and programme development, and facilitate monitoring and evaluation. Participating sites thus far are the City Solutions Network, the Urban Environmental Management Research Initiative, Murdoch University's Environmental Technology Centre (Western Australia) and the Regional Institute of Environmental Technology.

For more information, E-mail: emerald@unep.or.jp.

OECD Agri-Environmental Indicators

www.oecd.org/agr/env/indicators.htm
www1.oecd.org/agr/biodiversity/index.htm

The OECD Agri-Environmental Indicator (AEI) site has added a newsletter feature. Also newly available is documentation provided at the OECD Expert Meeting on Agri-biodiversity Indicators, held on 5-8 November 2001 in Zurich. (The results of that meeting were presented to the Subsidiary Body for Scientific, Technical and Technological Advice of the Convention on Biological Diversity at its meeting in Montreal on 12-16 November 2001. They will be presented to the Council of Europe/UNEP Pan European Conference on Biodiversity and Landscape, to be held in France in June 2002.) The AEI site also features the OECD Secretariat's overview paper on agri-biodiversity indicators, along with information on other reports and sites relating to agri-biodiversity.

For more information, contact: Kevin Parris, Policies and Environment Division, Agriculture Directorate, OECD, 2, rue Andre-Pascal, 75775 Paris Cedex 16, France, Tel: +33 1 45 24 95 68, Fax: +33 1 44 30 61 02, E-mail: Kevin.Parris@oecd.org.

CICERO

www.cicero.uio.no

The Center for International Climate and Environmental Research – Oslo (CICERO) posts its working papers in electronic form on its web site. Recent examples include "The Kyoto mechanisms and the quest for compliance: unresolved issues and potential pitfalls," "Decision-making frameworks for climate policy under uncertainty," and "Impatience and climate policy." CICERO, founded by the Norwegian government in 1990, is an independent research centre associated with the University of Oslo. Its mandate is two-fold: to conduct research into, and to provide information about, climate change issues.

For more information, contact: CICERO, PO Box 1129 Blindern, 0318 Oslo, Norway, Tel: +47 22 85 87 50, Fax: +47 22 85 87 51, E-mail: admin@cicero.uio.no.

Earthtrends Environmental Information Portal

http://earthtrends.wri.org
www.wri.org/wri

The World Resources Institute has a new interactive site called EarthTrends, which aims to be the first place people go for timely and accurate global environmental and sustainable development information. EarthTrends is intended not only for policy-makers in government and private industry, but also for NGOs, educators, students and the general public. There are five ways to explore this site: a searchable database, maps, country profiles, text and graphics "features" pieces, and pre-formatted data tables. Information is arranged in ten topic areas: coastal and

Sowing the Seeds of Change: An Environmental Teaching Pack for the Hospitality Industry

UNEP DTIE, the International Hotel & Restaurant Association, and EUHOFA International (an association of hotel schools) have produced this information pack as a way to develop and expand the environmental curriculum in hotel schools. It is designed to help professionals in the field of hotel management education develop a tailor-made environmental curriculum to suit the needs and objectives of each school and education system. The guide's principal aim is to increase awareness of the importance of environmentally responsible tourism among hospitality management students. It discusses key environmental issues, such as climate change, the ozone layer, biodiversity loss and pollution. It also focuses on the scope and enforcement of environmental law, the role of voluntary industry initiatives, and the principles of sustainable development. The elements of an environmental management system are discussed: e.g. environmental status review, development of an environmental management plan, objective-setting, auditing, and reporting on environmental performance. The final section enables students to assess sustainable building placement and design plans. This section explains the importance of site choice, the benefits of sustainable buildings, and the introduction of resource-efficient technologies for heating, water and other building systems and operations. The teaching pack is suitable for developing syllabuses at the degree and post-graduate levels. Examples of good practice and case studies are included.

(2001). UNEP. Available from EarthPrint Limited (see above). Ring binder, 210p. ISBN 92-807-2062-7

marine ecosystems; forests and grasslands; water resources and freshwater systems; agriculture and food; climate and atmosphere; population, health and human well-being; economics and business; energy; biodiversity and protected areas; and environmental governance. EarthTrends is sponsored by UNEP, UNDP, the World Bank, the David and Lucile Packard Foundation, the Ford Motor Company and the V. Kann Rasmussen Foundation. WRI has also redesigned its main site.

For more information, contact: World Resources Institute (WRI), 10 G Street, N.E. (Suite 800), Washington, D.C., 20002, USA. Tel: +1 202 729 7600, Fax: +1 202 729 7610.

Encyclopedia of Sustainable Development

www.doc.mmu.ac.uk/aric/esd

The government-sponsored Atmospheric Research & Information Centre (ARIC) in Manchester, UK, is the creator of the on-line Encyclopaedia of the Atmospheric Environment (www.doc.mmu.ac.uk/aric/eae). It has now launched a new on-line reference work, the Encyclopaedia of Sustainable Development. Like its predecessor, this encyclopaedia is user-friendly, clear and comprehensive. General topics are broken down into subtopics, which in turn are filled with internal and external links.

For more information, contact: Atmospheric Research & Information Centre (ARIC), Department of Environmental and Geographical Sciences, Manchester Metropolitan University, Chester Street, Manchester, M1 5GD, UK. Tel: +44 161 247 1592, Fax: +44 161 247 6332, E-mail: aric@mmu.ac.uk.

Information for Action

www.information.org

Founded by a small group of volunteers in Western Australia interested in both computers and the environment, this "free automated lobbying service" provides a database containing the names and contact details of over 2000 politicians and business leaders from 114 different countries and states within countries who are directly responsible for solving environmental problems. A search engine makes it possible to find contact details for politicians or business leaders by name, country or key words. The site also provides a short letter that can be edited to suit particular locations and situations. Information for Action explains environmental problems in simple terms and includes a quiz that lets users test their knowledge of the issues (the answers can all be found in the text on the site). Its main purpose is to minimize people's harmful effects on ecosystems through greater awareness and commitment to the support of environmental change. Ultimately, it seeks to "transform capitalism from a growth-oriented system to a sustainable one."

For more information, contact: Information for Action, PO Box 1040, West Leederville, Western Australia, 6901, Australia. Tel: +61 8 9228 0395, E-mail: info@information.org.

US Clean Technology Exchange

www.cleantechexchange.org

This free on-line resource is designed to enhance communication between companies in the United States, and those in Central and Eastern Europe and Eurasia, seeking to improve the environment of Central and Eastern European and Eurasian countries. The Clean Technology Exchange, an initiative of the US Agency for International Development's EcoLinks Program and the Global Environment and Technology Foundation (GETF), helps businesses examine the possibility of working in the region to implement the latest generation of environmental technology. The idea is to use automated matching to simplify the time-consuming, labour-intensive process of attracting new business, finding technology and trading partners, identifying projects, and locating providers of environmental technologies and services.

For more information, contact: US Agency for International Development (USAID), Bureau for Europe and the New Independent States, E&E/EEST/ENR, 1300 Pennsylvania Avenue, N.W., Washington, D.C., 20523-5601, USA. Tel: +1 202 712 0263, Fax: +1 202 216 3014, E-mail: ggold@usaid.gov.

Tailings Dams: Risks of Dangerous Occurrences – Lessons Learnt from Practical Experiences

This is Bulletin 121 in a series published by the International Commission on Large Dams (ICOLD) in association with UNEP DTIE's mining programme. It reviews more than 220 tailings dam accidents, from 1928 (Barahona, Chile) to 2000 (Baia Mare, Romania). Tailings, the residue of the process used to extract metal (e.g. gold) from ore, often contain heavy metals and toxic substances as well as chemicals added during milling. They are generally dumped in surface impoundments called tailings dams. Breaches in tailings dams usually have devastating environmental consequences. Many factors influence the behaviour of tailings dams; damage is often the result of inadequate site investigation, design, construction, operation and/or monitoring. This book includes examples of effective remedial measures that could help avert similar events. Intended chiefly for mining engineers, it includes detailed analyses of past accidents and focuses on lessons learned from them. Among the issues covered are prerequisites for safe impoundments, common reasons for faulty behaviour, and guidelines for risk management (including risk assessment and contingency plans). Bulletin 121, the sequel to Bulletin 106, is also available on CD-ROM.

(2001). UNEP. Available from EarthPrint Limited (see above). Pbk., 144p. ISBN 92-807-2053-8.

Abandoned Mines: Problems, Issues and Policy Challenges for Decision Makers – Summary Report

Produced jointly with the Chilean Copper Commission, this booklet summarizes presentations and discussions at the first Pan-American Workshop on Abandoned Mines held in Santiago, Chile, on 18 June 2001. This workshop was the first international meeting to consider issues surrounding the topic of abandoned mines, such as related environmental and social risks, legal liability issues, and who pays for remediating such sites or mitigating damage from them.

(2001). UNEP. Available from EarthPrint Limited (see above). Pbk., 26p.

EDITIONS FRANCAISES

Lexique de l'Eau

Le lexique recense 4 700 termes techniques en usage dans le domaine de l'eau, avec leur traduction dans les six langues suivantes : français, anglais, allemand, italien, espagnol et portugais. Il comporte six parties distinctes correspondant à chacune des six langues, ce qui facilitera sa consultation. C'est la première édition en six langues ; elle fait suite aux lexiques trilingue et cinq langues du même éditeur spécialisé dans le domaine de l'eau, des déchets et de l'environnement. Une version CD-ROM accompagne le lexique.

(2001). Editions Johanet, 30, rue Rene Boylesve, 75010 Paris, France. Tel: +33 1 44 84 78 78, Fax: +33 1 42 40 26 46, Internet: www.editions-johanet.com, 788p. ISBN 2-900086-73-6.

Piloter l'environnement dans l'entreprise

Cet ouvrage de l'Ordre des ingénieurs du Québec se veut un outil d'aide à la décision pour l'implantation d'un système de gestion environnementale. Un tel système sert à définir la structure organisationnelle, les responsabilités, les pratiques, les procédures et les ressources qui permettent de concrétiser la politique environnementale d'une entreprise. Fruit de deux ans et demi de recherche, d'études et de consultations, notamment auprès des membres du comité de l'environnement de l'Ordre, l'ouvrage propose une démarche pratique, applicable autant par les grandes entreprises que par les PME, baptisée l'Eco-Circuit stratégique. Le modèle décrit les cinq grandes étapes de la conception et de la mise en place d'un système de gestion environnementale. Pour chaque étape de l'Eco-

Circuit stratégique – engagement, planification, mise en œuvre, évaluation ou réévaluation – les aspects opérationnels les plus importants sont décrits et illustrés d'exemples concrets qui permettront au lecteur d'en tirer des leçons pratiques pour l'implantation de son propre système de gestion environnementale. Deux fils conducteurs font l'originalité de l'ouvrage : la notion d'optimisation des ressources et la mobilisation des ressources humaines. Grâce à l'architecture de l'ouvrage, le lecteur ayant besoin de références rapides pourra repérer aisément dans chacun des chapitres les parties qui l'intéressent.

D. Ferraud (2000). Ordre des ingénieurs du Québec, 2020, rue University, 18e étage, Montréal, Québec H3A 2A5, Canada. Tel. : +1 514 845 6141/1, +1 800 461 6141. Fax : +1 514 845 1833. Courriel : dirconn@oiq.qc.cq. Internet : www.oiq.qc.ca. 292p. ISBN 2-921408-94-5.

Gestion des zones côtières en Mediterranée

La Méditerranée, mer semi-fermée, subit l'impact d'une forte pollution due à tous les types d'activités maritimes et terrestres, ces dernières représentant 80 % des sources de pollution. Ce « livre blanc » est le résultat d'un criblage et d'une analyse approfondie d'un grand nombre d'études, de communications, de rapports d'ateliers et de guides, préparés par le Programme d'actions prioritaires dans le cadre du Plan d'action pour la Méditerranée du Programme des Nations Unies pour l'environnement (PNUE). Il offre une image panoramique des préoccupations environnementales dans cette région depuis le sommet à Rio de Janeiro en 1992. Outre un examen approfondi des impacts sur l'environnement des activités sur terre et en mer, l'ouvrage présente les initiatives et actions relatives à la gestion des zones côtières méditerranéennes et propose des options politiques pour l'avenir de la Méditerranée et le développement durable. Edité également en anglais (voir ci-dessus, GENERAL).

(2001). PNUE/PAM/PAP. Pour commander : EarthPrint limited, PO Box 119, Stevenage SG1 4TP, Hertfordshire, UK. Tel. : + 44 1438 748 111, fax : + 44 1438 748 844, courriel : orders@earthprint.com, internet : www.earthprint.com. 76p. ISBN 953-6429-41-1.

Territoires et développement durable

Edité par Comité 21 (Comité français pour l'environnement et le développement durable), ce guide a pour objet d'accompagner les collectivités, les structures intercommunales et leurs partenaires dans la mise en œuvre des politiques de développement durable. Il est complété par une base de données des bonnes pratiques du développement durable à consulter sur le site Internet « Cités 21 » (voir ci-dessous). L'Association des maires de France, la Délégation à l'aménagement du territoire et à l'action régionale, la Caisse des dépôts et consignations et Électricité de France ont collaboré à la réalisation du guide.

(2001). Comité 21, 3 villa d'Orléans, 75014 Paris, France. Tel. : +33 1 43 27 84 21, Fax : +33 1 43 27 84 20, Courriel : comite21@comite21.asso.fr, Internet : www.comite21.org. 50p. ISBN 2-9115204-03-3.

Tourisme, Ethique et Développement

Le développement des pays les plus pauvres par le tourisme sera-t-il durable et éthique ? C'est la question que pose cet ouvrage collectif, réalisé par le Groupe Développement avec le soutien de la Commission Européenne et du Ministère des Affaires Etrangères et le Secrétariat d'Etat au Tourisme français. Le Groupe Développement (organisation « humaniste chrétienne de solidarité internationale, apolitique et non-cléricale ») donne la parole à une trentaine de témoins et d'acteurs du développement touristique dans le monde, y compris I Gede Ardika, ministre de la Culture et du Tourisme d'Indonésie, Hervé Barré, chef de l'Unité de recherche et développement du secteur de la culture à l'UNESCO, et Sukumar Singh, secrétaire général de Mass Education, organisation non gouvernementale créée pour améliorer, par le tourisme, les conditions de vie des populations pauvres aux alentours de Calcutta.

Groupe Développement (2001). L'Harmattan, 5-7 rue de l'Ecole Polytechnique, 75005 Paris, France. Tel : + 33 01 40 46 79 11, Fax : 01 43 25 82 03, Courriel : harmat@worldnet.fr, Internet : www.editions-harmattan.fr, 303p. ISBN 2-7475-0988-5.

THE UNEP DIVISION OF TECHNOLOGY, INDUSTRY AND ECONOMICS

Current uses and development of natural resources, technologies and production processes, as well as urbanization patterns, have negative effects on human health and the environment. This is illustrated by unsustainable use of water, land and energy, air and water pollution, persistent and toxic bio-accumulative chemicals in the food chain, and other industry-related problems.

To have a healthy environment, we need to change how we produce and consume goods and services. This change involves revising and developing economic policies and trade practices, so as to integrate environmental issues in the planning and assessment processes.

UNEP's Division of Technology, Industry and Economics (UNEP DTIE) was created in 1998 to help decision-makers in governments, local authorities and industry develop and adopt policies and practices that:

- are cleaner and safer;
- use natural resources efficiently;
- ensure adequate management of chemicals;
- incorporate environmental costs;
- reduce pollution and risks for humans and the environment.

UNEP DTIE, whose main office is in Paris, is composed of:

◆ **The International Environmental Technology Centre (Osaka)**, which promotes the adoption and use of environmentally sound technologies, with a focus on the environmental management of cities and freshwater basins, in developing countries and countries in transition.

◆ **The Production and Consumption Unit (Paris)**, which fosters the development of cleaner and safer production and consumption patterns that lead to increased efficiency in the use of natural resources and reductions in pollution.

◆ **The Chemicals Unit (Geneva)**, which promotes sustainable development by catalyzing global actions and building national capacities for the sound management of chemicals and the improvement of chemical safety world-wide, with a priority on Persistent Organic Pollutants (POPs) and Prior Informed Consent (PIC, jointly with FAO).

◆ **The Energy and OzonAction Unit (Paris)**, which supports the phase-out of ozone depleting substances in developing countries and countries with economies in transition, and promotes good management practices and use of energy, with a focus on atmospheric impacts. The UNEP/RISØ Collaborating Centre on Energy and Environment supports the work of this Unit.

◆ **The Economics and Trade Unit (Geneva)**, which promotes the use and application of assessment and incentive tools for environmental policy, and helps improve the understanding of linkages between trade and environment and the role of financial institutions in promoting sustainable development.

UNEP
UNITED NATIONS ENVIRONMENT PROGRAMME
DIVISION OF TECHNOLOGY, INDUSTRY AND ECONOMICS
39-43, QUAI ANDRE-CITROËN
75739 PARIS CEDEX 15, FRANCE
TEL: (33) 1 44 37 14 50
FAX: (33) 1 44 37 14 74
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The next issue of *Industry and Environment* will focus on regional industry challenges for the decade.

Industry and Environment is an English language publication, but it often includes articles in French and Spanish. All contributed articles are accompanied by summaries in English, French and Spanish.

The review is also published in Chinese.
For further details, please contact:
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